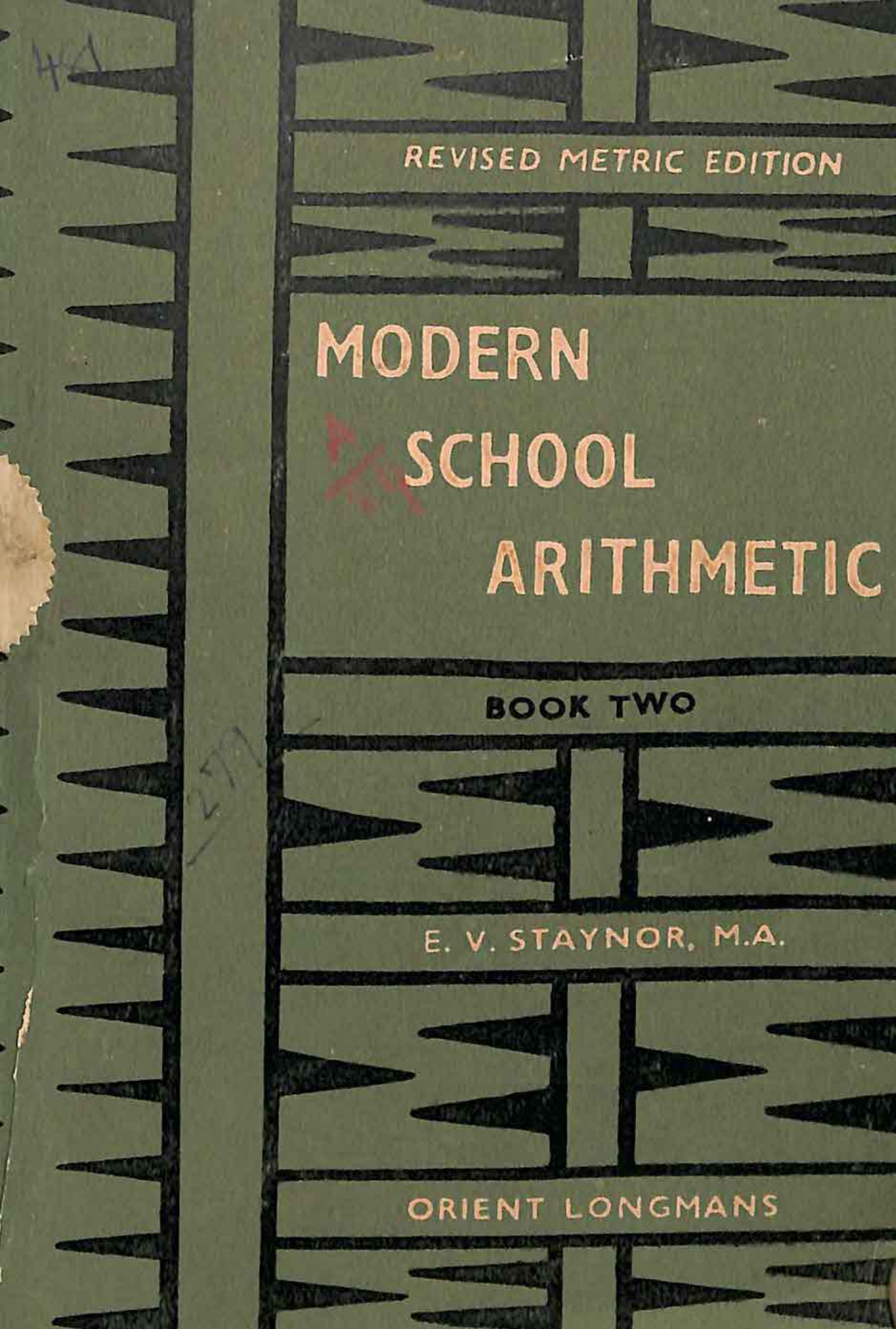

REVISED METRIC EDITION

MODERN SCHOOL ARITHMETIC

BOOK TWO

E. V. STAYNOR, M.A.

ORIENT LONGMANS

MULTIPLICATION TABLE

X	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**16**
1	1	2	3	4	5	6	7	8	9	10	11	12	16
2	2	4	6	8	10	12	14	16	18	20	22	24	32
3	3	6	9	12	15	18	21	24	27	30	33	36	48
4	4	8	12	16	20	24	28	32	36	40	44	48	64
5	5	10	15	20	25	30	35	40	45	50	55	60	80
6	6	12	18	24	30	36	42	48	54	60	66	72	96
7	7	14	21	28	35	42	49	56	63	70	77	84	112
8	8	16	24	32	40	48	56	64	72	80	88	96	128
9	9	18	27	36	45	54	63	72	81	90	99	108	144
10	10	20	30	40	50	60	70	80	90	100	110	120	160
11	11	22	33	44	55	66	77	88	99	110	121	132	176
12	12	24	36	48	60	72	84	96	108	120	132	144	192
16	16	32	48	64	80	96	112	128	144	160	176	192	256

481 (~~3555~~)

MODERN
SCHOOL ARITHMETIC

REVISED DECIMAL MONEY AND METRIC WEIGHTS AND MEASURES

A/84

STATE INSTITUTE OF EDUCATION BANIPUR

BOOK TWO

E. V. STAYNOR, M.A. (LONDON)
West Bengal Educational Service (Retd.)
Formerly Principal, St. Mary's Training College, Poona

Revised by
THE REVD. R. BENTINCK B.A., L.T.
SHERWOOD COLLEGE
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PREFACE

REVISED EDITION (1956)
OF
MODERN SCHOOL ARITHMETIC

The books of this series are expressly revised to provide for the change-over in India to the decimal money system to take effect from April 1957.

Until 1960 both the old and the new coins will be in circulation. The difficulties arising out of this dual circulation should not, however, affect the children of the age groups for whom these books are intended, to any great extent. All that they need be taught is what they will find directly and personally useful in the conduct of their school and home life. What may be so required by them will be found in the respective last chapters of the books. The work should be undertaken at suitable stages of the main course.

It should be noted that at first only the four lower denominations of the new coins will be put into circulation. The new quarter-rupee and the half-rupee will be added later. If in the interim their present counterparts are consistently referred to as the quarter-rupee and the half-rupee rather than as the four-anna bit and the eight-anna bit, the way to the adoption of the new system will be made much easier.

The main course in this edition is based on the new money system. The methods used in teaching this system are explained in a booklet published separately.

It is presumed that the teacher will obtain a copy of this booklet. All that need be mentioned here is that until the stage at which Decimals in general (Book 3) is reached the Naya Paisa is treated as the unit and the Rupee as a hundred units. The pupil is first taught to write his sums in full, e.g. 545 nP. The contraction to Rs. 5.45 is next introduced, the point being referred to as "the naya-paisa point". At these stages whenever the amounts are written in column form, the "Rs." is placed directly over the figures that represent the number of rupees.

This procedure follows the teaching practice of the countries that already have a decimal monetary system, and conforms to that advocated by the Inter-State Board for Anglo-Indian Education in its recent syllabus for the Primary School.

Suggestions, especially those that are the outcome of the experience of teaching the new money system, for the improvement of subsequent editions of this Series, will be gratefully received by the author.

Revised Edition 1962

The book covers the syllabus (as suggested by the Inter-State Board for Anglo-Indian Schools) for class IV.

The metric system of weights and measures has been introduced in place of the British and Indian weights and measures.

A new chapter on "THE METHOD OF ONE" has been added towards the end of the book.

There are revision tests included at the end, which should prove useful.

R. BENTINCK

TEACHER'S PAGE

Book 2 covers the syllabus for class 4 of the Codes.

The following comments and suggestions are given here for the teacher's immediate reference and guidance :

(1) *Directions to the teacher* are asterisked in the text.

(2) *Drill and Mental Arithmetic*. These may be required at more frequent intervals than is given in the text.

(3) *Races* are introduced to afford revision in the mechanical processes. Marks should be based on considerations of both speed and accuracy.

(4) *Individual Work*. The pupil may be allowed to check his own answers. These are given at the end of the book.

(5) *Problems*. The main types with which the class should become thoroughly acquainted are given on pages 15, 35, 44.

(6) *Notation*. The pupil's ability to read lakhs or hundreds of thousands is tested every now and then. No separate section is devoted to notation, however. It is left to the teacher to teach it incidentally.

(7) *Practical Work*. The bags referred to on page 11 are best made in the form of office envelopes out of light paper (a size 4½ in. by 5 in. will answer the purpose and will be of negligible weight).

(8) *Networks* (p. 58). The exercises of this section should be supplemented.

CONTENTS

(The numbers in brackets indicate pages)

Multiplication : eight times (1); eleven times (4); nines (16); 10 times (54); partial products (53); long multiplication (55-57); checking (80).

Division : accompanies multiplication (6); long division (divisors up to 40) (75, 77, 79).

Money : +(12); —(13); ×(22—24); ÷(42); payments (9); shopping (23, 24, 35, 49, 50); Acting "Treasurer" (74).

Metric System : Weights and Measures (18-21 and 23-24).

Problems : (5); (14-15); (17); (23); (43-44); (57).

The Clock : (71).

Parts of a Whole : ½ + and — (6); ¼, ¾ (48-50); ⅛ (67-68).

Networks : (58).

Drill and Mental Arithmetic : (7); (14); (30); (36); (45); (75).

"Races" (Speed tests in Mechanical Work) : (4); (6); (25); (38); (72).

Individual Work : (8); (26-28); (39); (47); (73); (74).

Practical Geometry : (84-95).
Revision tests : (96).
Answers to Exercises for Individual Work : (99-104).

MULTIPLICATION

EIGHT TIMES

These numbers go up 4 at a time :

0 4 8 12 16 20 24 28 32 36
40 44 48 52 56 60 64 68 72 76
80 84 88 92 96.

Write down these numbers.

Underline every second number thus : 0, 8, 16,.........

Now write down a string of numbers starting with 0 and going up 8 at a time.

Complete the 4 times tables below (the second line) :

	0	1	2	3	4	5	6	7	8	9	10	11	12
4 times	0	4	8	...	...								
8 times													

Multiply each number in the second row by 2 and put down the answers in the third row.

What tables have you now ? Why ?

*DODGING ABOUT

8 times

3	5	7	9	0	10	12	6	11	4	2	1	8
24	40	56	72	0	80	96	48	88	32	16	8	64

*(1) Cover up the lower line and read "Eight 3's 24" etc.

(2) Also read "Three 8's 24" etc.

(3) Cover up the top line and read "There are three 8's in 24" etc.

(4) Also read "one-eighth of 24 is 3" etc.

(Oral)

(1) Eight hockey teams : how many players in all ?

(2) Eight rows of trees with nine trees in each row : how many trees in all ?

(3) Nine rows of trees with eight trees in each row : how many trees in all ?

(4) Eight boxes of soap with a dozen cakes in each box : how many cakes in all ?

(5) A dozen packets of chocolate with 8 slabs in each packet : how many slabs in all ?

FILL IN THE BLANKS

(6) If I had —— rose plants I could plant them in 7 rows with 8 plants in each row.

(7) Teacher had 88 marbles and she was able to give —— boys 8 marbles each.

(8) Tom had 63 pictures and he said, "If I had one picture more, I could give each of my 8 friends —— pictures."

(9) If I save 25 nP. a week, in 8 weeks I shall have Rs.——.

(10) If I save Rs. 3 a week, in 8 weeks I shall have saved ——.

(11) I have 68 plums. If I had —— more, I could give 9 boys 8 plums each.

(12) My story book has 100 pages. If I read 9 pages of it a day, after a week I shall have —— pages left to read.

(1) 320×7 (9) 320÷7
(2) 312×8 (10) 312÷8
(3) 205×6 (11) 205÷8
(4) 123×5 (12) 123÷5
(5) 437×7 (13) 437÷7
(6) 523×6 (14) 523÷8
(7) 379×7 (15) 399÷7
(8) 425×8 (16) 425÷8

(1) 230×7 (9) 230÷7
(2) 213×8 (10) 213÷8
(3) 502×8 (11) 502÷8
(4) 321×5 (12) 321÷5
(5) 347×7 (13) 347÷7
(6) 352×8 (14) 352÷8
(7) 397×7 (15) 397÷7
(8) 254×8 (16) 254÷8

---

(1)
$$\begin{array}{r} 123 \\ +305 \\ +\ 57 \\ \hline \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 352 \\ -175 \\ \hline \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 734 \\ +205 \\ +390 \\ \hline \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 956 \\ -679 \\ \hline \\ \hline \end{array}$$

(5)
$$\begin{array}{r} 307 \\ +273 \\ +426 \\ \hline \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 705 \\ -507 \\ \hline \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 365 \\ +\ 74 \\ +\ 82 \\ \hline \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 753 \\ -\ 78 \\ \hline \\ \hline \end{array}$$

(1)
$$\begin{array}{r} 321 \\ +503 \\ +\ 75 \\ \hline \\ \hline \end{array}$$

(2)
$$\begin{array}{r} 523 \\ -157 \\ \hline \\ \hline \end{array}$$

(3)
$$\begin{array}{r} 437 \\ +502 \\ +930 \\ \hline \\ \hline \end{array}$$

(4)
$$\begin{array}{r} 965 \\ -697 \\ \hline \\ \hline \end{array}$$

(5)
$$\begin{array}{r} 703 \\ +372 \\ +642 \\ \hline \\ \hline \end{array}$$

(6)
$$\begin{array}{r} 507 \\ -\ 75 \\ \hline \\ \hline \end{array}$$

(7)
$$\begin{array}{r} 356 \\ +\ 74 \\ +\ 28 \\ \hline \\ \hline \end{array}$$

(8)
$$\begin{array}{r} 408 \\ -406 \\ \hline \\ \hline \end{array}$$

1 team has 1 goal-keeper +10 other players= 11 players in all.
2 teams have 2 goal-keepers +20 other players= 22 players in all.
3 teams have 3 " +30 other players= 33 players in all.

4 teams have
5 teams have
6 teams have
7 teams have } Continue.
8 teams have
9 teams have
10 teams have

---

*DODGING ABOUT : 11 times

Teams	1	3	5	4	9	8	6	10	7	2
Players	11	33	55	44	99	88	66	110	77	22

*Cover up the lower line and read
"3 teams have 33 players" etc.
*Cover up the top line and read
"33 players can form exactly 3 teams" etc.

RACES 1

(i)
(*d*) 6× = 66.
(*c*) 5×11= .
(*b*) 88—11= .
(*a*) 7+11= .
↑

(ii)
(*d*) 79+8= .
(*c*) ×8=64.
(*b*) 5× =40.
(*a*) 3× =33.
↑

(iii)
(*d*) 9+ = 72.
(*c*) 9× = 72.
(*b*) 63+ = 72.
(*a*) 63— = 51.

(iv)
(*d*) × 6=432.
(*c*) 7× = 91.
(*b*) 252— 7= .
(*a*) 263× 7= .
↑

(v)
(*d*) 63× 11= .
(*c*) — 53=425.
(*b*) 678— =509.
(*a*) 275—259= .

(vi)
(*b*) × 5=605.
(*a*) 736— 8= .
↑
(*d*) 100— = 48.
(*c*) 73+65+ 34= .

Complete the following sentences :

(1) I have 8 match boxes with 92 matches in each box. I have —— matches in all.

(2) I have started my stamp collection with 43 stamps. After I have collected —— more, I shall have 100 stamps.

(3) My classroom is 20 metres long and 15 metres broad. If I walk once around it, I shall walk —— metres.

(4) Teacher had 300 pieces of paper. She gave 27 boys 8 pieces each and has —— pieces left over.

(5) Harry said that his brother had 15 marbles less than he. Harry had 145 marbles. He and his brother had — marbles between them.

(6) I have 216 pictures. I can give —— girls 8 pictures each.

(7) I have 217 picture cards. I can give 7 boys —— each.

(8) There are 77 steps in our staircase. When I stand on the middle step I have —— steps to walk up or —— steps to walk down.

(9) Harry got 73 marks for Arithmetic and Jane got 82. If Harry had got 5 marks more, or Jane —— marks less, they would have tied.

(10) Daddy has a box of 100 cigars. If he smokes 8 a day, he will have —— left after a week.

(11) I can arrange 260 books on 8 shelves if I put 36 books on each of 7 of the shelves and —— books on the last shelf.

$$\begin{array}{r} 32\frac{1}{2} \\ +53\frac{1}{2} \\ \hline 86 \\ \hline \end{array} \quad \begin{array}{l} \frac{1}{2}+\frac{1}{2}=1 \\ \text{carry } 1 \end{array}$$

$$\begin{array}{r} 35 \\ -23\frac{1}{2} \\ \hline 11\frac{1}{2} \\ \hline \end{array}$$

Add 1 to the top line
and take ½ from it.
½ from 1 leaves ½.
Add 1 also to the lower line,
so read 4 instead of 3.

(1) $\begin{array}{r} 32\frac{1}{2} \\ +25 \\ \hline \\ \hline \end{array}$ (3) $\begin{array}{r} 325\frac{1}{2} \\ +286\frac{1}{2} \\ \hline \\ \hline \end{array}$ (5) $\begin{array}{r} 36 \\ -13\frac{1}{2} \\ \hline \\ \hline \end{array}$ (7) $\begin{array}{r} 53\frac{1}{2} \\ -37 \\ \hline \\ \hline \end{array}$

(2) $\begin{array}{r} 53\frac{1}{2} \\ +24\frac{1}{2} \\ \hline \end{array}$ (4) $\begin{array}{r} 253 \\ +378\frac{1}{2} \\ \hline \end{array}$ (6) $\begin{array}{r} 36\frac{1}{2} \\ -13\frac{1}{2} \\ \hline \end{array}$ (8) $\begin{array}{r} 53 \\ -38\frac{1}{2} \\ \hline \end{array}$

24×11

$$\begin{array}{r} 24 \\ \times 11 \\ \hline 264 \end{array}$$

693÷11

$$\begin{array}{r} 63 \\ \hline 11)\;693 \end{array}$$

697÷11

$$\begin{array}{r} 63 \text{ and rem. } 4 \\ \hline 11)\;697 \end{array}$$

(1) 32×11=
(2) 53×11=
(3) 72×11=
(4) 56×11=
(5) 363÷11=
(6) 781÷11=
(7) 572÷11=
(8) 913÷11=
(9) 367÷11=
(10) 783÷11=
(11) 575÷11=
(12) 916÷11=

RACES 2

(1) 321×11=
(2) 413×11=
(3) 253× 7=
(4) 253× 8=
(5) 363÷ 7=
(6) 781÷ 8=
(7) 606÷ 8=
(8) 606÷11=
(9) 511÷ 7=
(10) 626÷ 5=
(11) 873÷ 8=
(12) 803÷11=

3+2=5.
3 tens+2 tens=5 tens.
30+20=50.

6—2=4.
6 tens—2 tens=4 tens.
60—20=40.

When it is your turn, call out the answer of the sum.

(1) 30+40=
(2) 60+20=
(3) 60—20=
(4) 70+20=
(5) 70—20=
(6) 70+30=
(7) 70—30=
(8) 80+20=
(9) 80—30=

7 tens+9 tens=16 tens
i.e. 70+90 =160.

(1) 60+80=
(2) 90+20=
(3) 90+60=
(4) 80+70=
(5) 50+70=
(6) 60+60=

150—70
i.e. 15 tens—7 tens
=8 tens
=80.

(1) 140—80=
(2) 150—60=
(3) 120—70=
(4) 180—90=
(5) 50+70=
(6) 60+90=
(7) 70+70=
(8) 80+90=
(9) 170—90=
(10) 160—80=
(11) 160—50=
(12) 170—50=

INDIVIDUAL WORK I

Work these sums by yourself. Check each sum, as you finish it, with the answer given at the end of the book. If you are right, go on to the next sum. If you are wrong, try working the sum again. If you cannot get a sum right after trying it two or three times, take it up to teacher and ask her to show it to you.

Add :

(1)	(2)	(3)	(4)
356	627	835	695
+213	+853	+639	+312
+305	+ 72	+705	+640
+730	+ 9	+333	+139

(5) From 830 take 656. (6) Multiply 372 by 8.

(7) Divide three thousand seven hundred and twenty-four by seven.

(8) Take 72 from 800. (9) Multiply 256 by 11.

(10) Add 135 to 333 and divide your answer by 6.

(11) Subtract 63 from 500 and multiply your answer by 3.

(12) 833÷7. (13) 873÷8. (14) 273×8.

(15) 17+27+35—42. (16) 891+311—900.

(17) I loaded my air gun with 500 shots. I have already fired off 327 shots; so I must have —— shots left.

(18) I had 150 biscuits in my tin. I gave Mary 4 dozen and have myself eaten six a day for the past week. I must have —— biscuits left.

(19) —— mangoes will last my six friends and myself only 2 days if we each eat 3 mangoes a day.

(20) If I have to share 63 postcards among 8 pupils, the most I can give each of them is —— postcards and I shall have —— postcards over.

MAKING PAYMENTS : CHANGE

(Oral and Practical using cardboard "coins")

Teacher's Note :

The following are intended to serve only as examples of the kind of work to be undertaken at this stage. The work should be thoroughly practical, articles being displayed with price tags (the sums suggested being used) on them and cardboard coins issued.

EXERCISES

The amounts in these exercises have been written as 87 n.p. etc. They should also be written as Re. 0.87, and the pupil should be practised in reading the amount written thus : 87 n.P.

(1) Pay from 10 n.p. bits and n.p.

25 n.p; 32 n.p.; 37 n.p.; 43 n.p.; 58 n.p.
64 n.p; 38 n.p.; 14 n.p.; 90 n.p.; 86 n.p.

(2) Pay from 10 n.p. bits, 5 n.p. bits and n.p.

26 n.p.; 46 n.p.; 37 n.p.; 48 n.p.; 17 n.p.
69 n.p.; 70 n.p.; 73 n.p.; 79 n.p.; 64 n.p.

(3) Pay from 10 n.p bits, 5 n.p. bits, 2 n.p. bits and n.p.

27 n.p.; 36 n.p.; 29 n.p.; 38 n.p.; 44 n.p.
55 n.p.; 73 n.p.; 87 n.p.; 66 n.p.; 59 n.p.

(4) Pay from 25 n.p. pieces and n.p.

27 n.p.; 30 n.p.; 32 n.p.; 35 n.p.
40 n.p.; 43 n.p.; 47 n.p.; 50 n.p.

(5) Pay from 50 n.p., 10 n.p. pieces and n.p.
60 n.p.; 70 n.p.; 80 n.p.; 90 n.p.
62 n.p.; 73 n.p.; 85 n.p.; 97 n.p.

(6) Pay from 50 n.p. pieces and n.p.
51 n.p.; 61 n.p.; 72 n.p.; 83 n.p.
90 n.p.; 79 n.p.; 89 n.p.

(7) Fill in the blanks—

If I buy	and pay	I shall get back
a pen for 18 n.p.	25 n.p.	— change.

(8)

If I buy	and pay a	I shall get back
a top for 37 n.p.	50 n.p. bit	— change.

(9) How much change should I get back for a Rupee—
(*a*) if I pay it to buy a toy for 90 n.p. ?
(*b*) if I pay it to buy a toy for 80 n.p. ?
(*c*) if I pay it to buy a toy for 70 n.p. ?

(10) How much change should I get back for a Rupee—
(*a*) if I pay it to buy a toy for 95 n.p. ?
(*b*) if I pay it to buy a toy for 85 n.p. ?
(*c*) if I pay it to buy a toy for 75 n.p. ?

(11) How much change should I get back for a Rupee—
(*a*) If I pay it to buy a toy for 91 n.p. ?
(*b*) if I pay it to buy a toy for 81 n.p. ?
(*c*) if I pay it to buy a toy for 71 n.p. ?

Try first to do the following sums in your head. If there are any you cannot do in your head, work them out on paper.

Fill in the change column :

Price of article.	Payment made.	Change due back
(1) Re. 0.70	1 rupee	
(2) Re. 0.70	one 2-rupee note	
(3) Re. 0.70	one 10-rupee note	
(4) Rs. 1.50	2 rupees	
(5) Rs. 1.75	2 rupees	
(6) Rs. 1.80	2 rupees	
(7) Rs. 1.80	1 rupee and 2 50-n.p. bits.	
(8) Rs. 1.60	1 rupee and 2 50-n.p. pieces.	
(9) Re. 0.70	3 25-n.p. bits.	
(10) Re. 0.65	2 25-n.p. pieces and a 50-n.p. bit.	
(11) Rs. 8.70	one 10-rupee note	
(12) Rs. 4.60	one 5-rupee note	
(13) Rs. 6.75	one 10-rupee note	
(14) Rs. 4.25	one 5-rupee note	
(15) Rs. 8.90	one 5-rupee note and 4 rupees	
(16) Rs. 7.75	one 5-rupee note and 4 rupees	
(17) Rs. 1.25	1 rupee and 3 ten-n.p. pieces	
(18) Rs. 1.20	1 rupee and a 25-n.p. piece.	
(19) Rs. 2.25	1 rupee and 3 50-n.p. coins.	
(20) Rs. 1.25	1 rupee, 2 ten-n.p. pieces and a 5-n.p. piece.	

ADDITION (Revision)

Add Rs.
43.75
62.25
37.20
23.07
166.27 *Ans.* Read this as Rs. 166 27 n.p.

Add Rs. 37.35 + Rs. 23.10 + 75 n.p.
Arrange: Rs.
37.35
23.10
0.75
61.20 *Ans.* Read this as Rs. 61 20 n.p.

EXERCISES

Add and read your answer :

Rs.	Rs.	Rs.	Rs.
(1) 37.25	(2) 38.50	(3) 82.02	(4) 0.75
43.60	63.25	71.50	55.80
82.05	72.08	83.65	63.08
Rs.	Rs.	Rs.	Rs.
(5) 45.30	(6) 0.35	(7) 72.25	(8) 81.30
0.25	0.25	35.25	25.03
64.00	0.15	44.50	72.72

(9) Rs. 37.05 + Rs. 83.27 + 25 n.p.
(10) Rs. 37.00 + Rs. 3.05 + 45 n.p.
(11) Rs. 48.25 + Rs. 47.00 + 15 n.p.
(12) 35 n.p. + 27 n.p. + 84 n.p.
(13) 15 n.p. + 43 n.p. + 42 n.p.
(14) Rs. 39.45 + Rs. 75.25 + Rs. 9.00
(15) 75 n.p. + 8 n.p. + 80 n.p.
(16) 9 n.p. + 8 n.p. + 5 n.p.
(17) 60 n.p. + 6 n.p. + Rs. 73.25
(18) Rs. 0.65 + Rs. 0.75 + Rs. 7.05
(19) Rs. 75.26 + Rs. 15.37 + Rs. 5.10
(20) Rs. 7.25 + 6 n.p. + Rs. 72.50

SUBTRACTION (Revision)

Rs.
(1) 73.25
27.32
45.93 Ans. Read this as Rs. 45 93 n.p.

(2) From Rs. 82.50 take Rs. 25.75
Rs. 82.50
25.75
56.75 Ans. Read this as Rs. 56 75 n.p.

EXERCISES

	Rs.		Rs.		Rs.		Rs.
(1)	87.62	(2)	67.62	(3)	53.00	(4)	1.65
	—57.81		—48.83		—42.35		—0.75
	Rs.		Rs.		Rs.		Rs.
(5)	27.35	(6)	48.75	(7)	83.25	(8)	64.75
	—16.84		—19.08		—79.00		—63.89
	Rs.		Rs.		Rs.		Rs.
(9)	485.45	(10)	362.04	(11)	10.75	(12)	589.10
	—45.85		—161.40		—0.47		—212.82
	Rs.		Rs.		Rs.		Rs.
(13)	815.65	(14)	705.08	(15)	810.50	(16)	700.00
	—279.83		—452.85		—809.60		—639.75

(17) Take Rs. 32.25 from Rs. 64.00.
(18) From Rs. 75.25 take Rs. 45.75.
(19) From Rs. 45.25 take 75 n.p.
(20) Take Rs. 77.85 from Rs. 200.00.
(21) Subtract Rs. 86.54 from Rs. 865.40.
(22) Subtract Rs. 7.23 from Rs. 1000.00.
(23) Subtract Rs. 30.50 from Rs. 3050.00.
(24) From Rs. 5000.00 take Re. 0.75.

ADDITION and SUBTRACTION : PROBLEMS

Fill in the blanks :

(1) Tom has Rs. 3.50 and Harry has Rs. 4.25. They have Rs. —— together.

(2) Tom has Rs. 4.75, Harry Rs. 3.25 and Mary Rs. 6.80. Together they have Rs. ——.

(3) John saved Rs. 3.10 last week and Rs. 2.50 this week. He has saved Rs. —— in all.

(4) John has saved Rs. 5.60. If he saves Rs. —— more, he will be able to buy a bat for Rs. 10.00.

(5) Jane said, "I have saved Rs. 7.25. If I can save Rs. —— more, I shall be able to buy a doll for Rs. 12.00."

(6) Mary's mother bought her a doll for Rs. 15.50 and a doll's cot for Rs. 9.75. She paid Rs. —— altogether.

(7) Mary has Rs. 7.30, Jane Rs. 4.75 and John Rs. 10.00. Mary has Rs. —— more than Jane, but Rs. —— less than John.

(8) A boy paid a ten-rupee note for a penknife and got back Rs. 6.35 change. The penknife cost Rs. ——.

(9) John has Rs. 3.37, Harry has Rs. 4.12 and Tom Rs. 4.48. John and —— have Rs. 7.85 between them.

(10) John has Rs. 3.50 and Tom Rs. 5.30. If Tom gives John Rs. 1.25, John will have Rs. —— and Tom Rs. ——.

(11)
$$\begin{array}{r} 17.32 \\ +\ldots\ldots \\ \hline 40.15 \\ \hline \end{array}$$

(12)
$$\begin{array}{r} 18.56 \\ -\ldots\ldots \\ \hline 13.88 \\ \hline \end{array}$$

(1) Tom's, Henry's and Jane's ages add up to 24 years. What will their ages add up to, 5 years hence ?

(2) Jane has Rs. 5 more than Mary. If Jane gives Mary Rs. 2, how much more will she have than Mary ?

(3) Harry gave away half his pocket money. He then spent 36 n.p. on a penknife and found he had 25 n.p. left. What pocket money had he at first ?

(4) After spending 70 n.p. of her pocket money Jane found that she had 40 n.p. too little to buy a skipping rope which was priced at Rs. 3. How much pocket money had Jane at first ?

(5) Eight posts are placed in a line 23 metres apart. What is the distance between the first and the last posts ?

(6) My story book is 198 pages long. I have to read 35 pages more to finish half the book. How many pages have I left altogether ?

(7) Jane has 73 pictures, and Lilian 97. How many must Lilian give Jane so that both girls may have the same number ?

(8) For what numbers do the stars stand ?

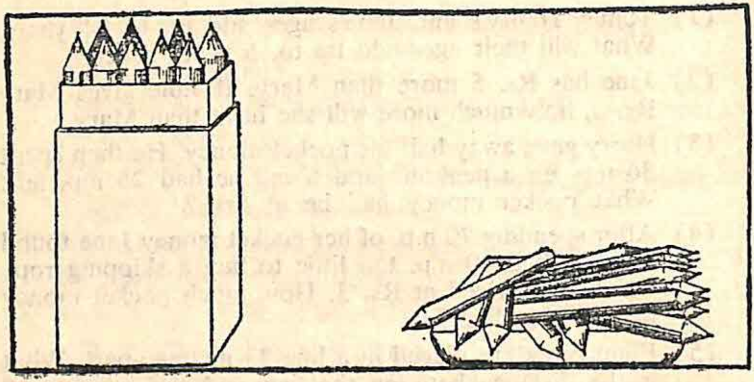
(*a*)
$$\begin{array}{r} 4\ 3\ 2 \\ +{*}\ 3\ 5 \\ +2\ {*}\ {*} \\ \hline 9\ 0\ 8 \\ \hline \end{array}$$

(*b*)
$$\begin{array}{r} {*}\ 5\ 2 \\ -2\ {*}\ {*} \\ \hline 5\ 4\ 3 \\ \hline \end{array}$$

(9) How many days is it from Wednesday to the following Monday if both days are included ?

(10) Instead of adding 12 to a certain number a boy subtracted 12. His answer was 25. What was the correct answer ?

(11) Jane had 16 large pictures, and Mary 20 small ones. They agree to exchange some of their pictures, counting 1 large picture as equal to 2 small ones. After the exchange Mary has 8 large pictures. How many small pictures has she ?



Here are packets of pencils. Each packet has 9 pencils. I wish to make some of them into packets of 19 by adding pencils from the tray.

How many pencils must I add altogether if I wish to have:

1 packet of 10?
2 packets of 10?
3 packets of 10?
4 packets of 10?
7 packets of 10?
12 packets of 10?

---

9 +1=10. So
Two 9's+2=20. Two 9's=18.
Three 9's+3=30. Three 9's=27.
Four 9's+4=40. Four 9's=36.

Continue.

Now cover up the middle column and learn the table.

DODGING ABOUT*

9 times

3	0	7	8	5	10	6	4	21	1	11	9	2
27	0	63	72	45	90	54	36	108	9	99	81	18

* Follow the instructions given for 8 times.

(1) 32×9
(2) 43×9
(3) 82×9
(4) 163×9
(5) 254×9
(6) 547×9
(7) 378÷9
(8) 315÷9
(9) 450÷9
(10) 486÷9
(11) 732÷9
(12) 837÷9

(1) 53×9
(2) 45×9
(3) 28×9
(4) 136×9
(5) 252×9
(6) 374×9
(7) 396÷9
(8) 326÷9
(9) 540÷9
(10) 495÷9
(11) 729÷9
(12) 846÷9

PROBLEMS

(1) There are 9 buns in each of 12 baskets. How many dozen buns in all?

(2) There are 16 buns in each of 9 baskets. How many dozen buns in all?

(3) A book costs Rs. 320. What will 9 such books cost?

(4) Work these sums the shortest way you can:

Add: 24
24
24
24
24
24
24
24
24

Add: 325
325
325
325
325
325
325
325
325

Add: 534
534
534
534
534
534
534

(5) Nine picture postcards fit on each page of my album. In my album there are 23 full pages and one with only 5 postcards on it. How many postcards in all?

(6) How many pieces of string 8 cm long can be cut off from a piece 400 cm long?

(8) Write in words: 63,806; 753,806; 8,80,705; 830,750; 7,56,007; 756,756.

The unit of length in the metric system is 1 metre.

Metric table of Length

100 centimetres = 1 metre
1000 metres = 1 Kilometre
short for centimetre (cm)
short for Kilometre (Km)

Metric table of Weight

1000 grams (gm) = 1 Kilogram (Kg)

Metric table of Capacity

100 centilitres (cl) = 1 litre (l)

Example (1) Express 5 metres 234 centimetres in centimetres.
5 m×100=500 centimetres
500 cm+234 cm=734 centimetres. *Ans.*

Example (2) Express 5 Km 786 m in metres.
5 Km×1000=5000 metres
5000 m+786 m=5786 metres. *Ans.*

Example (3) Express 9 Kg 582 gm in grams.
9 Kg×1000=9000 grams
9000 gm+582 gm=9582 grams. *Ans.*

Example (4) Express 8 litres 79 centilitres in centilitres.
81×100=800 centilitres
800 cl+79 cl=879 centilitres. *Ans.*

Example (5) Express 789 cm in metres and centimetres.
789 cm=700 cm+89 cm=7 m 89 cm. *Ans.*

Example (6) Express 2345 metres in Kilometres and metres.
2345 m=2000 m+345 m=2 Km 345 m. *Ans.*

Example (7) Express 898 centilitres in litres and centilitres.
898 cl=800 cl+98 cl=8 1 98 cl. *Ans.*

(1) Express in centimetres: 4 m; $5\frac{1}{2}$ m; 6 m 42 cm; 9 m 65 cm; 8 m 59 cm; 12 m 49 cm; 53 m 89 cm.

(2) Express in metres: 2 Km; $5\frac{1}{2}$ Km; $7\frac{1}{4}$ Km; 8 Km 459 m; 24 Km 76 m; 35 Km 67 m; 78 Km 787 m.

(3) Express in grams: 5 Kg; $7\frac{1}{2}$ Kg; $9\frac{3}{4}$ Kg; 6 Kg 898 gm; 10 Kg 777 gm; 12 Kg 984 gm; 54 Kg 67 gm; 37 Kg 13 gm.

(4) Express in centilitres: 9 1; $7\frac{1}{4}$ 1; $8\frac{3}{4}$ 1; 11 1 56 cl; 44 1 87 cl; 34 1 68 cl; 59 1 8 cl; 49 1 76 cl.

(5) Express in metres and centimetres: 678 cm; 563 cm; 1000 cm; 1111 cm; 2345 cm; 4979 cm; 3659 cm; 2999 cm.

(6) Express in Kilometres and metres: 1234 m; 3425 m; 7890 m; 4005 m; 5109 m; 10000 m; 12345 m; 23456 m.

(7) Express in Kilograms and grams: 1357 gm; 3579 gm; 7913 gm; 20000 gm; 23456 gm; 37978 gm.

(8) Express in litres and centilitres: 345 cl; 567 cl; 459 cl; 989 cl; 1000 cl; 1222 cl; 2344 cl; 4556 cl; 7877 cl.

(9) A boy's stride is 76 cm. If he takes 11 strides what distance has he covered?

(10) Express (i) 7 Km in centimetres; (ii) 4 Km 34 m in cm; (iii) 5 Km 6 m 8 cm in cm.

KILOGRAMS AND GRAMS

1000 grams (gm)=1 Kilogram (Kg)
$\frac{1}{2}$ Kg=500 gm; $\frac{1}{4}$ Kg=250 gm.

Add:

Kg	gm
5	256
8	878
14	134

256 gm+878 gm=1134 gm
=1 Kg 134 gm

8 Kg+5 Kg=13 Kg

Adding, 14 Kg 134 gm. Ans.

Subtract:

	Kg	gm
	7	456
	3	735
Ans.	3	721

We cannot take 735 gm from 456 gm. We take 1 Kg from 7 Kg. We then have
1000+456=1456
1456—735= 721 gm
6 Kg—3 Kg=3 Kg

Add:

(1)

Kg	gm
25	0
43	356

(2)

Kg	gm
15	257
23	479

(3)

Kg	gm
22	323
42	772

(4)

Kg	gm
21	112
35	591
22	276

(5)

Kg	gm
51	615
32	739
14	865

(6)

Kg	gm
35	396
43	739
61	932

Subtract:

(7)

Kg	gm
25	476
12	253

(8)

Kg	gm
34	352
21	125

(9)

Kg	gm
26	472
13	264

(10)

Kg	gm
46	287
24	872

(11)

Kg	gm
75	146
42	695

(12)

Kg	gm
87	396
49	937

(13)

Kg	gm
57	491
39	783

(14)

Kg	gm
92	95
47	929

(15)

Kg	gm
37	465
29	798

(16) Add $2\frac{1}{2}$ Kg, 1 Kg 275 gm, $3\frac{1}{4}$ Kg.

(17) In a school kitchen 9 Kg of tea are used a day. How many days would 162 Kg last ?

(18) A book weighs 525 gm, a penknife 75 gm, a cricket but 985 gm and a tennis racquet 375 gm. How much will they weigh altogether ?

(19) How much heavier is a box of chocolates which weighs 1 Kg 75 gm than a bottle of jam which weighs 454 gm ?

(20) A tin of sugar weighs 5 Kg 75 gm. If the tin weighs 263 gm, what is the weight of the sugar ?

Library
Date 7.1.2008
Acc. No. 12986

MONEY

Rs. 37·35×4

Rs.
37·35
4
149·40 *Ans.* Rs. 149·40

(Rs. 149 40 n.p.)

87 n.p.×5

Rs.
0·87
5
4·35 *Ans.* Rs. 4·35

(Rs. 4 and 35 n.p.)

EXERCISES

(1) Rs. 3·45×4
(2) Rs. 7·25×6
(3) Rs. 0·75×4
(4) Rs. 8·78×7
(5) Rs. 9·06×3
(6) Rs. 8·70×9
(7) Rs. 8·07×9
(8) Rs. 0·06×8
(9) Rs. 6·75×8
(10) Rs. 5·58×6
(11) Rs. 23·32×4
(12) Rs. 20·78×5
(13) Rs. 35·62×6
(14) Rs. 83·07×8
(15) Rs. 78·70×9
(16) Rs. 87·65×7
(17) Rs. 90·10×5
(18) Rs. 99·00×7
(19) 99 n.p.×3
(20) 6 n.p.×9
(21) 54 n.p.×6
(22) Rs. 71·54×3
(23) Rs. 312·00×5
(24) Rs. 723·25×6
(25) Rs. 732·32×7
(26) Rs. 805·05×4
(27) Rs. 805·50×9
(28) Rs. 666·75×3
(29) Rs. 121·21×9
(30) Rs. 765·43×5

PROBLEMS

(1) A top costs 80 n.p. How much will 7 tops cost ?

(2) A hockey stick costs Rs. 3·75. How much will 6 hockey sticks cost ?

(3) What is the cost of a dozen tins of jam at Rs. 2·25 a tin ?

(4) How much will you have to pay for 9 exercise books if they cost 75 n.p. each ?

(5) What must be paid for 8 pair of shoes priced at Rs. 7·30 a pair ?

(6) What is the cost of 7 Kg of sweets at Rs. 3·90 per Kg ?

(7) Find what must be paid for 7 pencils at Re. 0·25 each.

(8) If Harry spends 85 n.p. a day, how much will he spend in a week ?

(9) If a tin of biscuits costs Rs. 3·60, what will 6 tins cost ?

(10) What must be paid for a dozen nibs at 25 n.p. each ?

Fill in the blanks :

(11) 1 pen costs Rs. 5·50; 6 pens cost ——.

(12) 7 hockey sticks cost ——, if 1 stick costs Rs. 5·60.

(13) 1 Kg of sweets costs Rs. 5·95; 8 Kg of sweets cost —.

(14) 5 skipping ropes cost ——, if 1 skipping rope costs Rs. 3·35.

(15) 1 bun costs 35 n.p. A dozen buns cost Rs. ——.

Buns	35 n.p. each	Biscuits	Rs. 7.65 a Kg.
Barley Sugar	Rs. 2.50 a Kg	Eggs	Rs. 2.25 a doz.
Candy	Rs. 1.60 a Kg	Tea	Rs. 7.75 a Kg
Chocolates	Rs. 11.50 a Kg	Oats	Rs. 2.25 a Kg
Ground-nuts	Rs. 1.50 a Kg	Toffee	Rs. 5.20 a Kg

EXERCISES

(1) What will have to be paid for

- (*a*) 6 Kg biscuits
- (*b*) 7 Kg toffee
- (*c*) 1 doz. buns
- (*d*) 12 Kg barley sugar
- (*e*) 10 doz. eggs
- (*f*) 4 Kg candy
- (*g*) 8 doz. of eggs
- (*h*) 11 Kg tea
- (*i*) 9 tins oats ?

Example : Make out a bill for 5 Kg of biscuits and 3 Kg candy.

	Rs.nP.
5 Kg biscuits at Rs. 7.65 a Kg	38.25
3 Kg candy at Rs. 1.60 a Kg	4.80
	43.05
Ans. Rs.	43.05 n.p.

(2) Make out bills for

- (*a*) 2 Kg biscuits ; 3 Kg toffee
- (*b*) ½ doz. buns ; 5 doz. eggs.
- (*c*) 7 Kg tea; 9 tins oats.
- (*d*) 6 Kg candy ; 7 Kg ground nuts
- (*e*) 8 doz. eggs ; 9 buns
- (*f*) 9 Kg candy ; 9 Kg ground nuts
- (*g*) 7 Kg biscuits ; 5 Kg barley sugar
- (*h*) 500 gm candy ; 2 Kg chocolates ; 500 gm of ground nuts
- (*i*) ¼ Kg candy ; ½ chocolates ; ½ Kg toffee.

(1) To 20 add 15:
First add 10 and we get 30,
then add 5 and we get 35.
(When it is your turn, call out the answer.)

(2) To 30
add 15; add 14; add 13; add 19.

(3) To 40
and 16; add 17; add 18; add 15.

(4) To 60
add 17; add 13; add 12; add 16.

(5) To 30 add 26:
First add 20 and we get 50,
then add 6 and we get 56.

(6) To 30
add 23; add 27; add 25; add 28.

(7) To 50
add 24; add 23; add 29; add 27.

(8) To 60
add 34; add 37; add 38; add 35.

RACES 3

*(Only answers to be written)**

(i)	(ii)
↑ (*d*) 32+25+63=	↑ (*d*) 3 Kg 2 gm = gm.
(*c*) 100—30=	(*c*) Rs. =456n.p.
(*b*) 77— =11	(*b*) Rs. 4.56 = n.p.
(*a*) 82× 7=	(*a*) Rs. 7.75 = n.p.

* Go through the problems again on page 14.

INDIVIDUAL WORK 2

(Work by yourself. The answers are given at the end of the book.)

(A)

(1) Add 3215 to 4351, and divide your answer by 8.

(2) A tennis racquet costs Rs. 13·50, a hockey stick Rs. 4·75, and a cricket bat Rs. 7·80. What will the three together cost?

(3) From 4½ Kg take 2 Kg 715 gm.

(4) If ground-nuts are sold at Rs. 1·50 a Kg, find the cost of 9 Kg.

(B)

(1) Work these sums the shortest way you can:

(*a*)

$$\begin{array}{r} \text{Rs.} \\ 2\cdot35 \\ +2\cdot35 \\ +2\cdot35 \\ +2\cdot35 \\ +2\cdot35 \\ +2\cdot35 \\ \hline \\ \hline \end{array}$$

(*b*)

$$\begin{array}{r} \text{Rs.} \\ 3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ +3\cdot67 \\ \hline \\ \hline \end{array}$$

(2)

$$\begin{array}{lr} \text{From} & 35{,}623 \\ \text{take} & 28{,}947 \\ \cline{2-2} & \\ \cline{2-2} \end{array}$$

(3) Share 7126 marbles among 7 boys.

(4) A tennis racquet weighs 835 gm, a hockey stick 464 gm, and a cricket bat 756 gm. What will the three together weigh?

(C)

(1) From 83×12 take 84×7.

(2) I buy 3 Kg of chocolates at Rs. 11·75 a Kg and 5 Kg of candy at Rs. 1·60 a Kg. How much have I spent altogether ?

(3) An arm chair and five small chairs cost Rs. 175. The arm chair costs Rs. 35. What does each small chair cost ?

(4) Add ¼ doz.; ½ doz.; 2 doz.; 3 doz.

(D)

(1) 317×11= 317÷11= 412×12=
213× 8= 213÷ 8= 412÷12=
532× 7= 532÷ 7= 6532÷ 8=

(2) An arm chair and 8 small chairs cost Rs. 136. Each small chair costs Rs. 12. The arm chair costs Rs. ——.

(3) Add Rs. 3·56 to Rs. 2·29 and subtract your answer from Rs. 10.

(4) An empty box weighs 4 Kg 815 gm. What will it weigh when 2½ Kg of sugar are put into it ?

(E)

(1) A table and a chair together cost Rs. 40. The chair costs Rs. 12.75. What does the table cost ?

(2) My story book has 198 pages. If I read 11 pages a day, it will take me exactly —— days to finish the book.

(3) Rs. 3·77×11; Rs. 6·39×8;
Rs. 7·36×12; Rs. 5·94×7.

(4) Three loads of gravel, weighing 275 Kg., 364 Kg and 297 Kg., are put together and made into 8 equal heaps. How many Kilograms are there in each heap ?

(F)

(1) With 640 pencils I can make —— packets of a dozen pencils each, and there will be —— pencils over.

(2)
Add: Rs.	Add: Rs.
5·63	7·89
6·53	9·86
5·36	7·96
3·63	8·79
3·56	8·99
——	——
——	——

(3) Add 3½ Kg, 4½ Kg, 2 Kg 625 gm, 7 Kg 96 gm.

(4) What shall I have to pay in all for 8 books which cost Rs. 2·25 each and 7 neckties which cost Rs. 1·40 each ?

(G)

(1) Find the remainder in each of these division sums:

3215÷7.	3251÷11.	5060÷7.	3065÷6.
6254÷8.	3007÷ 6.	7009÷8.	3007÷5.

(2) Find the total cost of 7 Kg of barley sugar at Rs. 2·50 a Kg and ½ dozen buns at 35 n.p. each.

(3) From 9½ Kg take 2¾ Kg.

(4) 3 tables and 9 chairs cost Rs. 456 altogether. If each table cost Rs. 56, what did each chair cost ?

(5) Which of the following numbers can be divided exactly by both 7 and 8 ?

224; 455; 520; 392; 480; 315.

100 cm = 1 metre. cm is short for centimetre.
50 cm = $\frac{1}{2}$ metre. m is short for metre.
25 cm = $\frac{1}{4}$ metre.
10 cm = $\frac{1}{10}$ metre.
1000 metres = 1 Kilometre. Km is short for Kilometre.
500 metres = $\frac{1}{2}$ Km.
250 metres = $\frac{1}{4}$ Km.

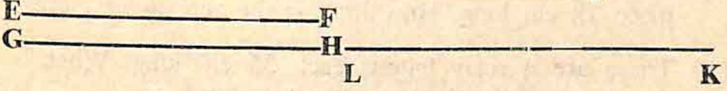
Teacher will give you a piece of wide tape. Use your ruler to mark off one metre. You have now a measure for measuring in metres. Now divide this metre into centimetres, making a mark with a red pencil after every 10 centimetres. You have now divided the metre into 10 equal parts. Each part is equal to 10 centimetres and is 1/10 (one-tenth) of a metre. With a blue pencil mark off centimetres. How many centimetres are there in a metre?

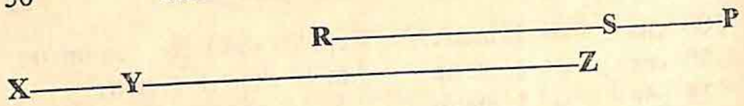
100 cm = 1 metre.

Use this tape you have marked to measure the length of
(*a*) the blackboard.
(*b*) the desk you use.
(*c*) the pencil you use.
(*d*) a rubber.
(*e*) the class room.
(*f*) an exercise book.
(*g*) this book.

Use your tape to measure the lines teacher draws on the blackboard.

Use your tape to measure these lines :





Write your answers like this:

AB = ...cm.
CD =
EF =
GH =
LK =
RS =
SP =
XY =
YZ =

CD+EF =
RP =
XZ =
GH+LK =

EXERCISES

(1) How many centimetres are there in ½ metre; ¼ metre; 1/10 metre?

(2) A line is 2 metres 35 cm long. How long will it be if another 94 cm are added to it?

(3) I place two tables each 1 metre 78 cm long next to one another so as to form one long table. How long will the table be?

(4) How many pieces of string each 8 cm long can be cut off from a string 1 metre 68 cm long?

(5) I have a curtain pole 2 metres 15 cm long. I cut off a piece 72 cm long. How long is the remaining piece?

(6) There are 4 relay batons each 35 cm long. What is the length of the 4 batons put together?

METRES AND CENTIMETRES

Add

(1) m cm
71 49
92 35

(2) m cm
82 45
79 55

(3) m cm
76 90
45 22

(4) m cm
61 43
+75 81
+91 56

(5) m cm
65 56
+43 34
+92 29

(6) m cm
75 96
+69 57
+43 28

Subtract

(7) m cm
85 54
—32 27

(8) m cm
76 33
—49 27

(9) m cm
43 34
—21 95

(10) m cm
75 59
—57 95

(11) m cm
67 46
—49 98

(12) m cm
62 72
—45 94

Add

Example 1. Km m
75 875
62 736
85 932

224 543

875 m
736 m
932 m

2543 m

2543=2 Km 543 metres
Put down 543 metres and
carry 2 Km.

METRES AND CENTIMETRES

Example 2.

Km	m
81	523
72	962
15	651
170	136

3+2+1= 6; put 6 down.
2+6+5=13; put 3 down and carry 1.
1+5+9+6=21; put 1 down and carry 2.
2+1+2+5=10; put 0 down and carry 1.
1+8+7+1=17; put down 17.

Ans. 170 Km 136 m

Add:

(1)

Km	m
22	245
31	456
42	123

(2)

Km	m
31	234
42	456
28	217

(3)

Km	m
21	965
32	451
15	121

(4)

Km	m
13	789
15	219
36	399

(5)

Km	m
26	785
45	976
52	789

(6)

Km	m
85	769
41	875
79	676

Subtract:

Km	m
83	475
44	596
38	879

6 from 5	...... I cannot.
6 from 15	9
9 from 6	...... I cannot.
9 from 16	7
5 from 3	...... I cannot.
5 from 13	8
4 from 2	...... I cannot.
4 from 12	8
4 from 7	3

METRES AND CENTIMETRES

Subtract

(7)

Km	m
75	478
33	256

(8)

Km	m
79	421
44	238

(9)

Km	m
63	786
43	498

(10)

Km	m
55	345
32	931

(11)

Km	m
48	224
21	986

(12)

Km	m
85	432
49	897

(13)

Km	m
43	321
29	987

(14)

Km	m
25	351
17	864

(15)

Km	m
95	345
59	678

(16)

Km	m
98	678
49	679

EXERCISES

(1) A man walks 85 metres along a straight road and then turns back and walks 27 metres. How far is he from where he started?

(2) A man travels 72 Kilometres by car and then 45 Kilometres by bus. How far has he travelled altogether?

(3) A boy walks 84 metres and then runs another 35 metres. How far is he from where he started?

(4) In a 100 metre race John beats Henry by 12 metres. What distance had Henry run when John passed the winning post?

(5) Jack throws a cricket ball 65 m 72 cm and John throws the ball 95 cm less. How far has John thrown the cricket ball?

(6) Mary jumps a length of 4 metres 15 cm and Sally jumps 39 cm less. How much does Sally jump?

(7) Dick's height is 1 metre 12 cm and his brother's height is 98 cm. How much taller is Dick than his brother?

(8) A hockey field is 100 metres long and 55 metres wide. If a boy walks once around the field, how far has he walked?

(9) A kitchen garden is 5 m 55 cm long and 3 m 49 cm wide. What length of fencing will be needed to fence the garden?

(10) The distance between Madras asd Bangalore is 352 Kilometres. A man travelling from Madras goes 219 Km by bus and then travels the rest of the distance to Bangalore by train. How many Kilometres does he travel by train?

PRICES

Narrow ribbon	Re. 0·50 a metre.
Broad ribbon	Rs. 1·15 a metre.
Buttons	Rs. 1·30 a dozen.
Elastic	Rs. 1·25 a metre.
Cloth	Rs. 3·35 a metre.

(1) Go shopping with a *ten-rupee note* :
In each case find what you spend altogether and also the change you bring back home :

(*a*) Buy 3 metres of narrow ribbon, 2 metres of cloth.

(*b*) Buy 2 metres of broad ribbon, 3 metres of elastic, 2 dozen buttons.

(*c*) Buy two metres of cloth, 1 metre of elastic.

(*d*) Buy seven metres of narrow ribbon, 2 metres of elastic, two metres of broad ribbon.

(*e*) Buy 4 dozen buttons, 2 metres of broad ribbon.

(2) Go shopping with *two ten-rupee notes* :

(*a*) Buy 3 metres of cloth, 3 dozen buttons, 2 metres of broad ribbon.

(*b*) Buy 5 metres of cloth, 1 metre of narrow ribbon.

(*c*) Buy 2 metres of broad ribbon, 3 dozen buttons, 3 metres of cloth.

(*d*) Buy 6 metres each of narrow ribbon and elastic, 2 metres of cloth and 1 metre of broad ribbon.

(3) Go shopping with *a ten-rupee note and a five-rupee note:*

(*a*) Buy two metres of cloth, 5 metres of broad ribbon and 1 metre of narrow ribbon.

(*b*) Buy 7 metres of elastic and 2 dozen buttons.

(*c*) Buy 2 metres of narrow ribbon, 1 metre of broad ribbon, ½ dozen buttons, 2 metres of elastic and 2 metres of cloth.

*When it is your turn, call out the answer :

(1) 27+8= .
(2) 35+8= .
(3) 23+8= .
(4) 36+8= .
(5) 24+8= .
(6) 27+7= .
(7) 35+7= .
(8) 43+7= .
(9) 24+7= .
(10) 36+7= .
(11) 38+6= .
(12) 32+6= .
(13) 49+5= .
(14) 28+5= .
(15) 27+5= .
(16) 23+9= .
(17) 33+9= .
(18) 35+9= .
(19) 38+5= .
(20) 28+7= .

DRILL

(*Blackboard*)

7+ 8=15.
17+ 8=25.
27+ 8=35.
37+ 8=45.
7+ 8=15.
7+18=25.
7+28=35.
7+38=45.

6+ 8= .
16+ 8= .
26+ 8= .
36+ 8= .
6+ 8= .
6+18= .
6+28= .
6+38= .

5+ 9= .
15+ 9= .
25+ 9= .
35+ 9= .
5+ 9= .
5+19= .
5+29= .
5+39= .

Continue with other combinations.

---

(1) 25—8= .
(2) 35—7= .
(3) 23—7= .
(4) 32—7= .
(5) 37—8= .
(6) 27—9= .
(7) 32—5= .
(8) 30—7= .
(9) 35+ =42.
(10) 26+ =32.
(11) 35— =28.
(12) 25+ =33.
(13) 33— =28.
(14) 43— =37.
(15) 23+ =31.

(*Oral*)

Suppose that John and Mary have 12 chocolate pictures each :

If John gives Mary 3,

John will have 3 less than before : he will have 9 pictures.

Mary will have 3 more than before : she will have 15 pictures.

We see that Mary will now have 6 more than John.

(1) John and Mary have 10 pictures each. If John gives Mary 4 pictures, how many more will Mary have than John ?

(2) John and Mary have 20 pictures each. If John gives Mary 6 pictures, how many more will Mary have than John ?

Suppose we wish to divide 14 picture postcards between John and Mary in such a way that Mary will receive 4 more than John.

We first make equal shares of 7 each.

Then we take 2 away from one share and add it to the other share.

One share is now 5 — this is John's.

The other is now 9 — this is Mary's.

(1) Share 20 marbles between James and Tom, giving James 6 more than Tom.

(2) Share 26 marbles between James and Tom, giving James 10 more than Tom.

(3) Share Re. 1 between two brothers, giving the elder brother 30 n.p. more than the younger.

(*Written*)

(1) Share 86 lemon-drops between two girls, giving the younger girl 8 more than the other girl.

(2) Share 68 chocolates between two girls, giving one of them 16 more than the other.

(3) Divide 94 children into two picnic parties so that there will be 12 more children in one party than in the other.

RACES 4

(i)

(1) 3718×7 ?

(2) Add 15 m 75 cm; 41 m 69 cm; 82 m 96 cm; 16 m 43 cm.

(3) Take 12 Kg 759 gm from 25 Kg 895 gm.

(4) Find the cost of 9 books at Rs. 2·25 each.

(5) What must be added to six hundred and seventy-five to make eight hundred and ninety-six ?

(ii)

(1) $6318 \div 9$?

(2) How many minutes in $\frac{2}{3}$ hour $+$ $\frac{1}{2}$ hour ?

(3) Find the cost of 8 bats at Rs. 6·54 each.

(4) Subtract 13 m 69 cm from 41 m 23 cm.

(5) Write 3568 gm in Kilograms and grams.

(iii)

(1) Write 5796 cm in metres and centimetres.

(2) Write 7591 n.p. in rupees and naye paise.

(3) Multiply 672 by 12 and divide your answer by 9.

(4) A man spent $\frac{1}{2}$ of his money. If he spent Rs. 69 how much had he at first ?

(5) Write in figures. Eight hundred thousand and eighty.

(iv)

(1) Add $756 + 897 + 628$.

(2) Multiply Rs. 7·69 by 8.

(3) Write in words: 80,790; 856,792; 756,305.

(4) How many grams in 7 Kg 56 gm ?

(5) Six bags of rice weigh 336 Kg. What is the weight of one bag ?

(1) How many pieces of wire 12 metres long can be cut from a piece 110 metres long? What length will be left over?

(2) How many boys can share 17 apples if each boy is to get half an apple?

(3) What is the cost of 9 books priced at Rs. 3·65 each?

(4) How many pages are there altogether in 9 books of 215 pages each?

(5) Ann bought $2\frac{1}{2}$ Kg of mixed sweets. These were made up of 525 gm of toffee, 725 gm of lemon drops; and the rest were peppermints. What was the weight of the peppermints?

(6) School starts at 9 o'clock in the morning. Ann arrived 4 minutes late and Mary 5 minutes early. How long before Ann did Mary arrive?

(7) $732+256+357+\quad=6000$.

(8) Posts are erected 8 metres apart. How many posts can be erected between two places, 1728 metres apart?

(9) On the 20th of November a boy said, "A fortnight more and holidays will begin." On what date did the holidays commence?

(10) A room is 9 metres long and 7 metres wide. What distance will you walk if you walk 12 times around it?

(11) A bell is rung every half-hour. If it is rung for the first time at 8 o'clock in the morning, when will it be rung for the 10th time?

(12) A train arrived at a station at 20 minutes past one o'clock instead of at half past twelve. How many minutes late was it?

(13) If there are 213 cups but only 157 saucers, how many cups will be without saucers?

(14) How many days are there from 15th May to 15th September if both days are included?

(15) 5 Kg 45 gm + 7 Kg 96 gm =
7 Kg 851 gm + 9 Kg 249 gm =
6 Kg 746 gm + 8 Kg 647 gm =

Total =

(16)
$$\begin{array}{rcrcr} \text{Rs.} & & \text{Rs.} & & \text{Rs.} \\ 3\cdot56 & + & 6\cdot29 & = & \\ 4\cdot49 & + & 3\cdot46 & = & \\ 5\cdot16 & + & 5\cdot89 & = & \\ \hline \end{array}$$

(17) A man buys a watch for Rs. 15·75 and sells it for Rs. 21·50. What does he gain?

(18) A girl in working a multiplication sum multiplied by 7 instead of by 5. Her answer was 168. What was the correct answer?

(19) I have to pay Rs. 12 for 8 Kg of sweets. If the price goes up 4 n.p. a Kg, how much will I then have to pay for all the sweets?

(20) For what numbers do the stars stand in these sums?

(*a*)
$$\begin{array}{r} 6\ 5\ 3 \\ +2\ 8\ * \\ +*\ *\ 5 \\ \hline 1\ 0\ 8\ 0 \\ \hline \end{array}$$

(*b*)
$$\begin{array}{r} 5\ 6\ \times \\ * \\ \hline 3\ 9\ 2 \\ \hline \end{array}$$

(21) I have just an hour before school begins. It takes me 13 minutes to walk there. If I spend 35 minutes, playing with my Meccano, and then 24 minutes at the cycle shop, I shall be....minutes late.

(22) An empty tin box weighs 785 gm. What will it weigh when 2 Kg 715 gm of sugar are put into it?

(23) Harry has 73 glass marbles and James 100 stone marbles. They agree to exchange some of their marbles, a glass marble for 3 stone ones. If, after the exchange, Harry has 50 glass marbles, how many stone marbles will James have?

(Addition and Subtraction)

100 Centilitres (cl) = 1 litre (1)

(1) $$\begin{array}{rr} l & cl \\ 17 & 87 \\ +42 & 55 \\ +96 & 37 \\ \hline \end{array}$$

(2) $$\begin{array}{rr} l & cl \\ 15 & 45 \\ +16 & 97 \\ +32 & 41 \\ \hline \end{array}$$

(3) $$\begin{array}{rr} l & cl \\ 32 & 45 \\ +43 & 72 \\ +55 & 66 \\ \hline \end{array}$$

(4) $$\begin{array}{rr} l & cl \\ 32 & 75 \\ -19 & 24 \\ \hline \end{array}$$

(5) $$\begin{array}{rr} l & cl \\ 43 & 39 \\ -21 & 93 \\ \hline \end{array}$$

(6) $$\begin{array}{rr} l & cl \\ 32 & 23 \\ -17 & 87 \\ \hline \end{array}$$

(7) $$\begin{array}{rr} l & cl \\ 45 & 51 \\ -39 & 87 \\ \hline \end{array}$$

(8) $$\begin{array}{rr} l & cl \\ 79 & 15 \\ -61 & 89 \\ \hline \end{array}$$

(9) A barrel holds 7 litres 75 cl of water. If 2 litres 96 cl is drawn out how much water is left in the barrel ?

(10) A car can go 14 Km on a litre of petrol. How far will it go on 11 litres of petrol ?

(11) A motor cycle can go 45 Km on 1 litre of petrol. How far can it go on 9 litres of petrol ?

(12) A Kerosene tin holds 20 litres of oil. I draw out 5 litres 75 cl and then pour in 4 litres 35 cl. How much oil is there now in the tin ?

(13) Each boy in school is given ¼ litre of milk a day. How many litres of milk will be needed for 224 boys every day ?

(14) At a party each child is given ¼ litre of mango juice. How many litres of mango juice will be needed for 72 children ?

(15) A bucket holds 8 litres of water. I draw out 5 litres 75 cl and then pour 4 litres 95 cl. How much water is there now in the bucket ?

Example 1.

Rs. 76·50÷6
Rs. 12·75 *Ans.*

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6) 76·50

Example 2.

Rs. 82·78÷7
Rs. 11·82 *Ans.*

---

7) 82·78 and 4 n.p. over.

EXERCISES

(1) Rs. 45·50÷ 7
(2) Rs. 93·60÷ 8
(3) Rs. 70·32÷ 6
(4) Rs. 6·75÷ 9
(5) Rs. 53·55÷16
(6) Rs. 94·92÷10
(7) Rs. 113·68÷ 8
(8) Rs. 137·99÷ 9
(9) Rs. 115·58÷ 5
(10) Rs. 162·76÷10
(11) Rs. 339·40÷ 4
(12) Rs. 606·03÷ 8
(13) Rs. 142·35÷ 6
(14) Rs. 479·45÷ 9
(15) Rs. 386·00÷ 5
(16) Rs. 488·00÷ 8
(17) Rs. 931·00÷ 7
(18) Rs. 891·00÷11
(19) Rs. 793·10÷11
(20) Rs. 698·06÷11
(21) Rs. 450·00÷12
(22) Rs. 458·76÷12
(23) Rs. 6943·56÷ 7
(24) Rs. 3785·60÷ 8
(25) Rs. 4785·66÷16
(26) Rs. 3125·61÷ 9
(27) Rs. 7172·50÷ 9
(28) Rs. 6235·74÷10
(29) Rs. 7000·00÷16
(30) Rs. 8000·00÷ 7

PROBLEMS

(1) If one book costs Rs. 3·25, eight books will cost ——.

(2) If 7 books cost Rs. 7·56, one book will cost ——.

(3) If Harry and his seven friends save Rs. —— each, they will just be able to buy a cricket bat worth Rs. 26·16.

(4) Milk is being sold at Rs. 4·50 for 6 bottles. What is the price of 1 bottle ?

(5) If oil costs Rs. 2·30 a bottle, how much will have to be paid for 9 bottles ?

(6) Half a dozen exercise books cost Rs. 25·50. What is the price of 1 exercise book ?

(7) Pencils can be bought at Rs. 27·00 a dozen. What is the price of 1 pencil ?

(8) Nibs are being sold at 75 n.p. a dozen. I shall have to pay —— for a gross.

(9) Mary receives Rs. 33·00 pocket money a year. How much a month is this ?

(10) John receives Rs. 3·80 pocket money a month. What does he get in a year ?

(11) Rs. 13·26 is to be divided equally among 6 children. What will each child's share be ?

(12) If Rs. 17·10 is divided equally among 9 boys and Rs. 9·10 is divided equally among 5 girls, who will get more, a girl or a boy ? How much more ?

Two-Stage Problems

(1) John had Rs. 3·50. He spent Rs. 1·30 and then his mother gave him Rs. 2·75. How much has he now?

(2) Harry had Rs. 10 out of which he spent Rs. 4·30 on a photo-album and Rs. 3·45 on a book. How much has he now?

(3) Mary's mother bought her a doll for Rs. 7·50, a pen for Rs. 3·25 and a book for Rs. 5·80. She gave the shopkeeper two 10-rupee notes. What change did the shopkeeper return her?

(4) Jane has saved Rs. 6·50. How much more must she save in order to be able to buy herself a paint box for Rs. 5·75 and her friend a birthday present for Rs. 6·25?

(5) Jim had Rs. 3·25. He lent Harry Rs. 2·75 and later Harry returned him Rs. 2. What did Jim then have?

(6) A toy motor-car costs Rs. 9·25 and a toy train costs Rs. 3·25 more. What will you have to pay if you buy both?

(7) A man had Rs. 35·75. He bought 7 tins of cigarettes at Rs. 2·25 each. How much did he have left?

(8) John was given Rs. 20 to buy sugar. He bought 6 Kilograms at Rs. 2·50 a Kg. How much money did he have left?

(9) Harry said, "If I had 25 n.p. more, I could buy 5 tops at 35 n.p." How much had he?

(10) John saved Rs. 2·50 a week of his pocket money for 7 weeks. He then found that he needed Rs. 5 more to be able to buy a camera. What is the price of the camera?

Divide 26 plums between two boys so that one boy will get 10 more than the other boy.

The last time we worked this sum like this :

We first made two equal shares of 13 plums.

Then we took away 5 plums from one share, and added them to the other share.

The boy's shares were then 8 and 18.

We will now work the sum like this :

First put aside 10 plums. 16 plums remain.

Divide the 16 plums into two equal shares of 8.

Then add on the 10 plums to one of the equal shares.

The shares will now be 8 and 18.

EXERCISES

(1) Divide Rs. 38 between two men, giving one man Rs. 8 more than the other.

(2) Divide 85 litres of oil between two drums sō that one drum will have 9 litres more than the other.

(3) Divide a line 1 metre long into two parts so that one part will be 16 cm longer than the other.

(4) Pack 100 eggs in two boxes, with 30 more eggs in one box than in the other.

(5) Divide 35 marbles between 3 boys so that the eldest will get 5 marbles more than each of the others.

(6) Divide 100 pictures between 6 girls so that the youngest will get 10 more than each of the others.

(7) Divide Rs. 70 between 3 men so that one of them will get Rs. 5 less than the others.

(8) Divide Rs. 25 between 4 men so that one of them will get Rs. 3 less than the others.

(9) Of 61 holidays there were 25 less rainy days than dry days. On how many days did it rain ?

(10) During the month of July one year we had 7 more class days than holidays. How many class days had we ?

RACES 5

(i)

(1)

l	cl.
75	45
+82	97
+43	56

(2)

Kg	gm
75	95
+45	856
+61	107

(3) Rs. 29·16÷9.

(4) 3456÷7.

(5) 273+375+73+9.

(6) 4586—3728.

(ii)

(1) I have Rs. 15·36 and I spend Rs. 7·89. How much have I left ?

(2) I buy 9 metres of cloth at Rs. 7·12 a metre. How much do I spend altogether ?

(3) Tom buys sweets for Rs. 2·15, a book for Rs. 1·45 and a bottle of pickle for Rs. 3·65; if he has Rs. 2·75 left, how much had he at first ?

(4) Divide 8315 by 5 and multiply your answer by 7.

(5) Multiply 759 gm by 8.

(iii)

(1) I buy 2 Kg 475 gm of one kind of tea and 3 Kg 575 gm of another kind of tea. How much tea have I bought altogether ?

(2) From 45 litres 75 cl take away 19 litres 89 cl.

(3) Multiply three thousand five hundred and sixty-seven by eight.

(4) Divide Rs. 5·13 by 9.

(5) 973+856+213—749.

(iv)

(1) Write in words : three hundred thousand eight hundred and nine; one million five hundred; and fifty-seven thousand three hundred and seventy-five.

(2) Multiply 73 by 9, then divide 747 by 9 and add the two answers.

(3) How many minutes are there in $2\frac{1}{3}$ hours ?

(4) A school uses 75 litres of milk a day. How many litres will it use in a week ?

(5) A train travels 56 Km an hour. How many Kil [illegible] es will it travel in 12 hours ?

(1) What is the price of 9 chairs which cost Rs. 15·10 each?

(2) What is the total weight of 8 tennis racquets which weigh 825 gm each?

(3) A drum can hold 19 litres 75 cl of water. If there are already 5 litres 90 cl of water in it, how much water will be needed to fill it?

(4) An aeroplane travels 485 Km in one hour. How far will it travel in 9 hours?

(5) A motor car can go 12 Km on 1 litre of petrol. How far can it go on 12 litres of petrol?

(6) Divide 225 marbles between two boys so that one boy will get 85 marbles more than the other.

(7) Six children have to subscribe between them Rs. 7.20 for a picnic. What is each child's subscription?

(8) A full tin of jam weighs 510 gm. The jam alone weighs 454 gm. How much will 7 empty tins weigh?

(9) In a school there are 273 children. One third of them are girls; how many boys are there in the school?

(10) Mother bought 3 Kg 450 gm of vegetables. These were made up of 775 gm of carrots, 675 gm of green peas, 1 Kg of potatoes and the rest were tomatoes. How much tomato did she buy?

(11) A dozen knives cost Rs. 25·20. What does each knife cost?

(12) Nine boys subscribe 46 n.p. each for tips to be divided equally between 6 servants. What will each servant get?

(13) How many days are there from June 21st to November 10th, if only one of these days is included?

(14) For what numbers do the stars stand?

$$\begin{array}{r} *3 \\ \times * \\ \hline 7*4 \\ \hline \end{array}$$

(15) Write in words: 63,894; 60,804; 6,00,804; 68,40,000.

Add 7½ and 3¾.

$$\begin{array}{r} 7\frac{2}{4} \\ +3\frac{3}{4} \\ \hline 11\frac{1}{4} \\ \hline \end{array}$$

Remember to write ½ as $\frac{2}{4}$.
2 quarters + 3 quarters = 5 quarters.
But 5 quarters = 1 whole and 1 quarter over.
Put down ¼ and carry 1.

From 8½ take 3¾. We cannot take 3 quarters from 2 quarters.

$$\begin{array}{r} 8\frac{1}{2} \\ -3\frac{3}{4} \\ \hline 4\frac{3}{4} \\ \hline \end{array}$$

So we add 4 quarters (or 1 whole) to the top line and read it as 6 quarters.
3 quarters from 6 quarters = 3 quarters.
We must also add 1 to the lower line.
So instead of 3 we read 4.
4 from 8 leaves 4.

EXERCISES

(1) 3½+2¼.
(2) 3½—2¼.
(3) 7¼+3¾.
(4) 7¼—3¾.
(5) 7 —3¾.
(6) 7 —3½.
(7) 8¼+1¾.
(8) 8 +2¾.
(9) 9½—3¾.

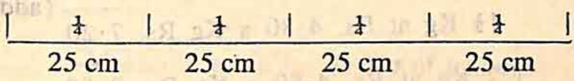
(10) How much longer must a line 7¼ cm long be made so as to measure 10 cm ?

(11) If two lines, one 3¾ cm and the other 2½ cm are joined to form one line, how long will this line be ?

(12) A plant was 8½ cm high at the beginning of a week, and 9¼ cm high at the end of the week. How much did it grow during the week ?

"¼" and "¾"

(1) How many centimetres is ¼ metre?
Divide 100 cm by 4 (Divide 100 cm into 4 equal parts). 100÷4=25 cm.
So 25 cm is one quarter of a metre.
Therefore two quarters of a metre is 2×25 cm=50 cm.
That is 2/4 or ½ a metre is 50 cm.
¾ metre will be 3 times ¼ metre or 3×25 cm=75 cm.



(2) (*a*) How many grams is ¼ Kg?
(*b*) How many grams is ½ Kg?
(*c*) How many grams is ¾ Kg?

(3) How many minutes is ¾ hour?

(4) How many naye paise is ½ rupee?

(5) How much is ¾ of a dozen?

(6) A boy runs ½ of 100 metres. How far has he run?

(7) A girl buys a ribbon ½ metre long. How many centimetres long is the ribbon?

(8) How many centilitres is ½ litre?

(9) Mary was told to practise on the piano for 40 minutes: but she practised for only ½ of the time. How many minutes longer should she have practised?

(10) Harry ate ¾ of his cake and then found that the rest weighed 45 gm. What did the whole cake weigh?

(11) Mary was asked to buy ½ metre of ribbon, but she bought ¾ metre of ribbon. How many centimetres in excess did she buy?

(12) How much is: 2½ doz., 3½ doz., 4¼ doz., 5¾ doz.?

(13) Write the following in dozen:—36, 42, 30, 48, 54, 81, 75, 129, 57, 105.

If 1 Kg of sweets costs Rs. 4·80
then ½ Kg will cost Rs. 4·80÷2
or Rs. 2·40
and ¼ Kg will cost Rs. 4·80÷4
or Rs. 1·20
and ¾ Kg will cost 3 times the cost of ¼ Kg
or Rs. 1·20×3=Rs. 3·60.

Price of 1½ Kg
1 Kg at Rs. 4·80 a Kg Rs. 4·80
½ Kg at Rs. 4·80 a Kg Rs. 2·40
(add)
1½ Kg at Rs. 4·80 a Kg Rs. 7·20

Price of 2¼ Kg
2 Kg at Rs. 4·80 a Kg Rs. 9·60
¼ Kg at Rs. 4·80 a Kg Rs. 1·20
(add)
So 2¼ Kg cost Rs. 10·80

Price of 2¾ Kg
¾=½+¼
2 Kg at Rs. 4·80 a Kg Rs. 9·60
½ Kg at Rs. 4·80 a Kg Rs. 2·40
¼ Kg at Rs. 4·80 a Kg Rs. 1·20
(add)
So 2¾ Kg cost Rs. 13·20

EXERCISES

Find out the cost of:

(*a*) ¼ Kg tea at Rs. 4·56 a Kg.
(*b*) ½ Kg toffee at Rs. 2·80 a Kg.
(*c*) ¾ Kg toffee at Rs. 2·80 a Kg.
(*d*) 2½ Kg sugar at Rs. 2·50 a Kg.
(*e*) 3¼ Kg dhal at Rs. 2·80 a Kg.
(*f*) 4¾ Kg rice at Rs. 2·60 a Kg.
(*g*) 1¾ Kg beans at Rs. 1·60 a Kg.
(*h*) 2½ doz. buttons at Rs. 1·50 a dozen.
(*i*) 3¼ doz. eggs at Rs. 2·60 a dozen.
(*j*) 4½ doz. lollipops at Rs. 1·60 a dozen.
(*k*) 2½ litres of oil at Re. 0·70 a litre.
(*l*) 4¼ litres of petrol at Re. 0·80 a litre.

Prices :

Tea Rs. 7·60 a Kg
Eggs Rs. 2·60 a dozen
Chocolates Rs. 8·40 a Kg
Buttons Rs. 1·50 a dozen

Cloth Rs. 3·60 a metre
Toffee Rs. 2·80 a Kg
Ribbon Re. 0·80 a metre
Oats Rs. 4·50 a Kg

Example:

Make out a bill for 3¼ Kg of tea and 4 doz. eggs.

	Rs. nP.
3 Kg tea at Rs. 7·60 a Kg	22·80
¼ Kg tea at Rs. 7·60 a Kg	1·90
4 doz. eggs at Rs. 2·60 a doz.	10·40
Total Rs.	35·10

Answer Rs. 35·10 n.p.

Make out bills for the following:

(*a*) 4 metres ribbon, 2½ metres cloth.
(*b*) 1½ Kg chocolates, 2¾ Kg tea.
(*c*) 2½ Kg oats, 4½ doz. eggs. 1½ doz. buttons.
(*d*) 30 buttons, 2¼ Kg toffee, 3½ metres ribbon.
(*e*) 1¾ metres ribbon, ¾ Kg chocolates, 33 eggs.
(*f*) 3¾ metres cloth, 1½ doz. eggs, 18 buttons.
(*g*) 1¾ Kg chocolates, 1½ Kg oats, 1¾ Kg tea.
(*h*) 2½ doz. eggs, 1¾ Kg toffee, 2¾ metres ribbon.

Example:

27 boys are each given 4 large marbles and 5 small ones.
How many large marbles have they altogether?
How many small marbles have they altogether?
How many marbles in all?

$27 \times 4 = 108$ large marbles.
$27 \times 5 = 135$ small marbles.

243 marbles in all.

Checking the last line.

Each boy has 9 marbles.
So there are $27 \times 9 = 243$ marbles in all.

EXERCISES

(1) In a class there are 35 children. Each child has 2 pair of brown shoes and 5 pair of black shoes.
How many brown pairs altogether?
How many black pairs altogether?
How many pairs altogether? (Check.)

(2) 47 girls are given 5 blue ribbons and 3 white ribbons each.
How many white ribbons altogether?
How many blue ribbons altogether?
How many ribbons in all? (Check.)

(3) In each of 18 plates there are 5 plain cakes and 7 iced cakes.
How many plain cakes altogether?
How many iced cakes altogether?
How many cakes in all? (Check.)

(4) In a photo-album there are 38 pages. On each page there is space for 4 small photos and 3 large ones.
How many small photos and how many large photos will be needed to fill the album?
How many photos in all?

Fill in the blanks and check the multiplication in the last line of each sum.

(1)
$$\begin{array}{l} 37\times\ 3=111\\ 37\times\ 7=259\\ \hline 37\times10=370 \end{array}$$

(2)
$$\begin{array}{l} 83\times5=415\\ 83\times2=166\\ \hline 83\times\quad= \end{array}$$

(3)
$$\begin{array}{l} 56\times\ 4=224\\ 56\times\ 5=280\\ \hline 56\times\quad= \end{array}$$

(4)
$$\begin{array}{l} 75\times6=450\\ 75\times5=375\\ \hline 75\times\quad= \end{array}$$

(5)
$$\begin{array}{l} 98\times\ 3=\\ 98\times\ 4=\\ \hline 98\times\quad= \end{array}$$

(6)
$$\begin{array}{l} 325\times6=\\ 325\times2=\\ \hline 325\times\quad= \end{array}$$

38×13.

$$\begin{array}{ll} 38\times\ 7=266 & \text{(1st step)}\\ 38\times\ 6=228 & \text{(2nd step)}\\ \hline & \text{(Add)}\\ 38\times13=494 & \\ \hline \end{array}$$

(1) 57×13.
(2) 29×14.
(3) 63×15.
(4) 23×17.
(5) 82×17.
(6) 95×13.
(7) 54×15.
(8) 63×18.
(9) 63×17.
(10) 231×13.
(11) 438×17.
(12) 639×15.

(13) 68×15.
(14) 55×13.
(15) 63×18.
(16) 82×17.
(17) 35×19.
(18) 73×17.
(19) 82×15.
(20) 87×14.
(21) 197×13.
(22) 283×17.
(23) 361×18.
(24) 405×15.
(25) 371×14.
(26) 308×13.
(27) 803×15.
(28) 763×17.
(29) 909×15.
(30) 876×13.

(1) $3\times10=30$; $4\times10=40$; $5\times10=50$
$8\times10=$; $7\times10=$; $2\times10=$
$9\times10=$; $6\times10=$; $3\times10=$

(2) $35\times10=350$; $63\times10=630$; $77\times10=770$
$54\times10=$; $27\times10=$; $90\times10=$
$49\times10=$; $80\times10=$; $67\times10=$

(3) $432\times10=4320$; $825\times10=8250$; $999\times10=9990$
$675\times10=$; $730\times10=$; $505\times10=$
$824\times10=$; $654\times10=$; $333\times10=$

(4) $830\div10=$; $500\div10=$; $6000\div10=$
$630\div10=$; $450\div10=$; $6150\div10=$
$6300\div10=$; $5730\div10=$; $6050\div10=$
$7210\div10=$; $30\div10=$; $4060\div10=$

(5) $35=30+5$; $47=40+7$; $82=80+2$
$63=$; $69=$; $49=$
$75=$; $44=$; $96=$
$732=700+30+2$; $856=800+50+6$
$473=$; $549=$
$666=$; $509=$
$403=$; $590=$

(6) Write each of these as one number:
$60+4$; $60+9$; $70+7$; $50+8$; $20+1$;
$30+2$; $50+5$; $90+8$; $40+4$; $30+7$;
$700+90+3$; $600+70+5$; $400+40+4$;
$800+0+5$; $500+80+0$; $300+60+9$.

(7) $732\div10$. First set aside the 2 units. The number is now 730.

$730\div10=73$.
So $732\div10=73$, rem. 2.

$735\div10$; $478\div10$; $1024\div10$; $8695\div10$;
$836\div10$; $583\div10$; $6388\div10$; $3167\div10$;
$673\div10$; $637\div10$; $3905\div10$; $2101\div10$;
$608\div10$; $509\div10$; $3907\div10$; $5386\div10$.

$$\begin{array}{r|r} \times 4 & 37 \\ 37 & \times 40 \\ \hline 148 & 1480 \\ \hline 74 & 74 \\ \times 6 & \times 60 \\ \hline 444 & 4440 \\ \hline \end{array}$$

In multiplying by 4, start in the 10's column.

In multiplying by 6, start in the 10's column.

(1) 68×4; ×40; ×6; × 3; ×30; ×5; ×50.
(2) 79×7; ×70; ×9; ×40; ×60; ×4; ×90.
(3) Multiply 635 by 4; multiply 635 by 40.
(4) 732× 6; 635×70; 402× 7; 350×60.
732×70; 823×60; 402×80; 305×90.
999×40; 650×70; 205×90; 634× 7.

84×67

$$\begin{array}{rl} 84 & \\ 67 & \\ \hline 5040 & \text{60 times} \\ 588 & \text{7 times} \\ \hline 5628 & \text{67 times} \\ \hline \end{array}$$

(5) 83×57; 62×74; 26×74; 82×17.
(6) 26×47; 35×43; 35×34; 85×19.
(7) 68×68; 82×82; 46×75; 93×15.
(8) 54×73; 78×28; 66×44; 28×91.
(9) 94×83; 89×91; 32×63; 32×57.
(10) 65×65; 74×35; 53×67; 58×54.

736×48

$$\begin{array}{rl} 736 & \\ 48 & \\ \hline 29440 & \text{40 times} \\ 5888 & \text{8 times} \\ \hline 35328 & \text{48 times} \\ \hline \end{array}$$

(1) 635×84; 709×49; 762×17; 832×28.
536×48; 49×49; 539×18; 457×63.
937×97; 325×19; 403×15; 743×25.
670×14; 520×74; 777×77; 829×32.

(2) In a multiplication sum the number we multiply by is called the *multiplier*.

Fill in the multipliers in the following multiplication sums :

(*a*)
$$\begin{array}{r} 65 \\ \\ \hline 2600 \\ 195 \\ \hline 2795 \\ \hline \end{array}$$

(*b*)
$$\begin{array}{r} 75 \\ \\ \hline 4500 \\ 450 \\ \hline 4950 \\ \hline \end{array}$$

(*c*)
$$\begin{array}{r} 83 \\ \\ \hline 7470 \\ 166 \\ \hline 7636 \\ \hline \end{array}$$

(3) Multiply 63 by itself.

(4) Add 5 to 49, and then multiply the answer by 27.

(5) Take 17 from 64, and then multiply the answer by 48.

(6) Multiply 47 by 82, and then multiply the answer by 10.

(1) How many minutes are there in 18 hours?

(2) How many minutes are there in a day?

(3) In a mango grove there are 53 trees. If 27 mangoes are plucked from each tree, how many mangoes are plucked in all?

(4) What number multiplied by 40 will give 2920 as answer?

(5) In multiplying a number by 60 a boy got 3252 as his answer. Was he right?

(6) If 27 mangoes are plucked from each of 17 trees and then packed in 9 boxes, how many will there be in each box?

(7) There are 48 boxes each containing 36 electric bulbs. How many bulbs are there altogether?

(8)

$$\begin{array}{r} \ast\ast \\ 36 \\ \hline 1560 \\ 312 \\ \hline 1872 \\ \hline \end{array}$$

For what numbers do the stars stand in this multiplication?

(9) A man pays 37 workmen Rs. 19 each. How much will he have left over from Rs. 800?

(10) A man has Rs. 400. How much more must he have to be able to pay 23 workmen Rs. 24 each?

(11) A man saves Rs. 55 a month for 2 years. How much does he save altogether?

(12) A steamer travels 342 Km a day. How far will it travel in a fortnight?

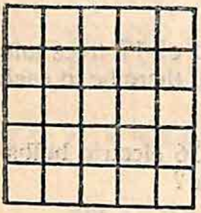
Fig. 1 shows a large square divided up into a network of smaller squares.

Fig. 2 shows a large oblong divided up into a network of small squares.

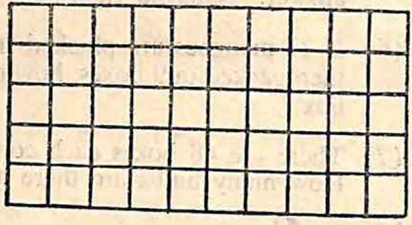
Each of the figures 3 and 4 on the next page shows only part of the complete network.

EXERCISES

1



2



(1) In fig. 1, there are 5 rows and 5 columns. How many small squares are there in the network?

Suppose there were 12 rows, how many small squares would there be?

Suppose there were 17 rows, how many small squares would there be?

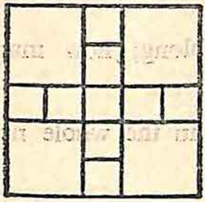
And if there were 28 rows, how many small squares would there be?

(2) Find the number of small squares in fig. 2, without actually counting all of them.

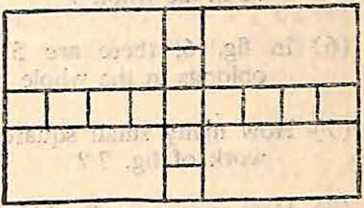
Suppose there were 17 columns and 6 rows, how many squares would there be?

Suppose there were 18 columns and 15 rows, how many small squares would there be?

3



4

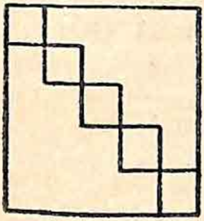


(3) In fig. 3, suppose there were 18 squares in each cross band, how many squares would there be in the complete network?

(4) In fig. 4, suppose there were 15 squares in one cross-band and 23 in the other, how many squares would there be in the whole network?

(5) In fig. 5, the diagonal squares are shown. Suppose there were 8 of these, how many would there be in the whole? (Contd.)

5



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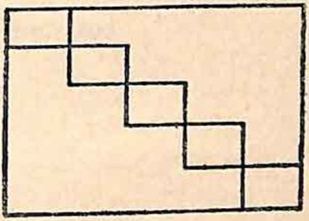
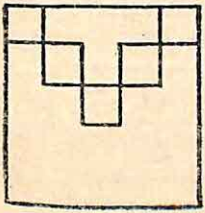
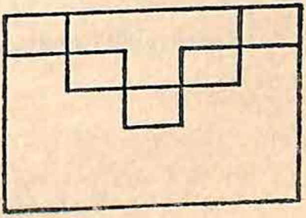


7



8



Suppose there were 22 of them, how many would there be in the whole ?

(6) In fig. 6, there are 5 diagonal oblong; how many oblongs in the whole figure ?

(7) How many small squares are there in the whole network of fig. 7 ?

(8) How many small oblongs are there in the complete fig. 8 ?

Example (1) :

$$\begin{array}{rr} \text{m} & \text{cm} \\ 5 & 27 \\ & \times\ 6 \\ \hline 31 & 62 \\ \hline \end{array}$$

$27 \times 6 = 162$ cm $= 1$ 62 cm

5m $\times\ 6 = 30$ m; $30 + 1 = 31$ m

Example (2) :

$$\begin{array}{rr} \text{m} & \text{cm} \\ 77 & 28 \\ & \times\ 8 \\ \hline 618 & 24 \\ \hline \end{array}$$

Ans. 618 metres 24 cm.

Example (3) : Divide 12 m 48 cm by 8.

$$\begin{array}{ll} 1\ \text{m} & 56\ \text{cm}\ \textit{Ans.} \\ \hline 8)\ 12\ \text{m} & 48\quad \text{1st method} \\ 8 & 400 \\ \cline{1-1} \cline{2-2} 4\ \text{m} & 8)\ 448 \\ & 40 \\ \cline{2-2} \times 100 & 48 \\ & 48 \\ \cline{1-1} \cline{2-2} 400\ \text{cm} & \\ \hline \end{array}$$

2nd method (Short way)

$$\begin{array}{rr} \text{m} & \text{cm} \\ \hline 8)\ 12 & 48 \\ \hline 1 & 56 \\ \hline \end{array}$$

Ans. 1 metre 56 cm.

EXERCISES

(1) 6 m 1 cm × 6; × 8; × 9; × 12.
(2) 9 m 27 cm × 5; × 7; × 12; × 11.
(3) 12 m 34 cm × 3; × 5; × 7; × 12.
(4) 14 m 8 cm ÷ 2; ÷ 4; ÷ 8.
(5) 28 m 56 cm ÷ 4; ÷ 8.
(6) 59 m 70 cm ÷ 10; ÷ 3.
(7) 85 m 86 cm ÷ 9; ÷ 3.
(8) 129 m 76 cm ÷ 16; ÷ 4.
(9) 256 m 41 cm ÷ 9; ÷ 11.
(10) 187 m 64 cm ÷ 7; ÷ 2.
(11) 556 m 32 cm ÷ 6; ÷ 4.

(12) A piece of wire 3 m 28 cm is bent to form a square. How long is each side of the square?

(13) A piece of wire is 18 metres 48 cm long. If it is cut up in 12 equal pieces, what is the length of each piece?

(14) Each girl uses a wide ribbon 1 metre 25 cm long as a sash. How many metres will be needed for 16 girls?

(15) Five benches each 2 metres 79 cm long are placed end to end. What is their total length?

(16) A tree is now 2 metres 64 cm high. If it grows 24 cm a year, how tall will it be in 6 years from now?

(17) A pencil is 18 cm long. If 11 pencils are placed end to end, what is their total length?

(18) I give 8 people each 4 metres 75 cm of cloth. If I have 42 metres of cloth, how much will be left over?

(19) Harry's stride is 76 cm. If he takes 12 strides, how far has he gone from his starting point?

(20) Which is larger and by how much, 72 cm × 12 or 64 cm × 16 ?

(21) I divide 75 metres of cloth among 10 people. How much will each get ?

(22) A tape is 1 metre 15 cm. long. I use it to measure a wall and find that the wall is 11 times the length of the tape. How long is the wall ?

Remember 1000 gm = 1 Kg.

Examples :

Kg	gm
5	75
	×5
25	375

Ans. 25 Kg 375 gm

Kg	gm
7	456
	×8
59	648

Ans. 59 Kg 648 gm

	Kg	gm
4)	8	456
	2	114

Ans. 2 Kg 114 gm

	Kg	gm
8)	13	736
	1	717

Ans. 1 Kg 717 gm.

EXERCISES

(1) 5 Kg 64 gm × 3; ×5; ×7; ×12.

(2) 7 Kg 124 gm × 4; ×6; ×8; × 9.

(3) 9 Kg 226 gm × 3; ×7; ×9; ×11.

(4) 6 Kg 456 gm ÷ 2; ÷4; ÷3.

(5) 15 Kg 750 gm ÷ 5; ÷3; ÷6.

(6) 24 Kg 605 gm ÷ 7; ÷5.

(7) 87 Kg 549 gm ÷ 11; ÷7.

(8) 8 Kg 64 gm ÷ 7; ÷8; ÷9; ÷16.

(9) 12 Kg 544 gm of sugar are to be stored in 8 tins, an equal amount being put into each tin. How much will be put into each tin ?

(10) What is the total weight of 9 parcels, each of which weighs 2 Kg 275 gm ?

(11) A hockey team is given 4 Kg 730 gm of sweets to be shared equally among themselves. How much does each player get ?

(12) The weight of a cricket ball is 132 gm. Find the weight of a dozen balls ?

(13) A tin containing 8 packets of sweets weighs 5 Kg 285 gm. The empty tin weighs 357 gm. What is the weight of each packet ?

(14) A box containing 9 tins of butter weighs 4 Kg 400 gm. If the empty box weighs $1\frac{1}{3}$ Kg, what does each tin of butter weigh ?

LITRES AND CENTILITRES

Remember 100 Centilitres=1 litre (l).

Example :

5 l 49 cl	8 l 76 cl÷6
×6	6) 8 l 76 cl
32 l 94 cl	1 l 46 cl
Ans. 32 l 94 cl.	*Ans.* 1 l 46 cl.

EXERCISES

(1) 6 l 72 cl×3; × 5; × 7; × 4.
(2) 9 l 87 cl×7; × 8; ×11; × 9.
(3) 7 l 46 cl×8; ×10; ×12; ×16.

(4) 45 1 69 cl× 7; ×11; ×12; ×10.
(5) 27 1 56 cl× 4; ×71; × 9; ×10.
(6) 78 1 64 cl÷ 1; ÷ 4; ÷ 8.
(7) 87 1 78 cl÷ 7; ÷11.
(8) 63 1 36 cl÷ 8; ÷ 9; ÷11.
(9) 30 1 24 cl÷ 7; ÷ 6; ÷ 8.
(10) 18 1 70 cl÷11; ÷10; ÷ 5.

(11) A tub holds 75 litres 57 cl of water. If the water is poured into 11 buckets of same size, how much water does each bucket hold?

(12) 16 cans of milk are used each day in a school. If each can holds 5 litres 45 cl, how much milk does the school use every day?

(13) The tank of a car holds 32 litres 25 cl of petrol. If 4½ litres is used every day, how much petrol is left in the tank after a week?

(14) I buy 9 tins of pine-apple juice. If each tin contains 65 cl how much do the 9 tins contain?

(15) A cook uses 45 cl of mustard oil a day. How much does he use in 16 days?

LONG MULTIPLICATION

(1) 33×57.
(2) 67×28.
(3) 43×59.
(4) 69×20.
(5) 29×99.
(6) 32×23.
(7) 83×82.
(8) 437×28.
(9) 615×30.
(10) 725×15.
(11) 723×51.
(12) 430×26.
(13) 303×47.
(14) 503×40.
(15) 625×43.
(16) 620×39.
(17) 602×50.
(18) 600×70.

$$7\times9=9\times7.$$
$$8\times4=4\times8.$$

If we have to multiply 5 by 76, we may multiply 76 by 5 instead.

If we have to multiply 37 by 235, we may multiply 235 by 37 instead.

(19) 5× 76.
(20) 7× 83.
(21) 9×835.
(22) 8×303.
(23) 76×253.
(24) 45×532.
(25) 53×210.
(26) 89×606.
(27) 50× 723.
(28) 80× 535.
(29) 73× 629.
(30) 7×6296.

(31) Multiply 76 by itself and add 235 to your answer.
(32) Add 237 to 456 and multiply your answer by 23.
(33) Multiply 22 by 37. Then multiply your answer by 46.
(34) Multiply 63 by itself and divide the answer by 9.
(35) Multiply 72 by itself and divide the answer by 8.

REVISION EXERCISES

	Rs.	Rs.	Rs.	Rs.	Rs.
(1)	14·56	85·59	64·93	45·47	72·16
	+17·69	+72·93	—47·89	—29·89	—48·87
	+27·45	+48·57			

(2) (*a*) Rs. 17·46×9 (*b*) 17 l 9 cl×7
(*c*) 25 m 7 cm×8 (*d*) Rs. 72·45×10
(*e*) 85 l 64 cl×10 (*f*) 48 m 44 cm×11
(*g*) 27 Kg 64 gm×7 (*h*) 45 Kg 87 gm×12
(*i*) Rs. 785·62×9.

(3) $4\frac{1}{2}+3\frac{1}{4}$; $9\frac{1}{4}—8\frac{1}{2}$; $4\frac{3}{4}+5\frac{1}{2}$; $6\frac{1}{2}—3\frac{3}{4}$; $7\frac{1}{2}—4\frac{3}{4}$.

(4) 4896÷8; 784×13; 924÷11; 412÷4; 875×16.

(5) John spends Rs. 3·75 on books, Rs. 2·57 on sweets, Rs. 1·25 for a horse ride and has Rs. 2·43 left. How much had he at first?

(6) How many dozens are there in 1728?

(7) Share 75 marbles between two boys so that one has 15 marbles more than the other.

(8) How many minutes are there in $\frac{3}{4}$ hour + $\frac{2}{3}$ hour?

(9) Rs. 14·98÷7; Rs. 75·98÷8; Rs. 97·60÷11; 25 m 84 cm÷8; 47 m 7 cm÷9; 63 m 4 cm÷8.

(10) Make a bill for the following:
$3\frac{1}{2}$ metres of cloth at Rs. 14 a metre.
$2\frac{1}{4}$ doz. buttons at Rs. 1·60 a dozen.
$3\frac{3}{4}$ Kg toffee at Rs. 2·40 a Kg.

(11) Write in words; 85,091; 70,056; 652,194; 803,040; 1,709,107.

(12) 487×17; 856×13; 945×15; 768÷8; 612÷16.

(13) A boy gets a basket of mangoes. Fifteen mangoes are bad. He gives 8 to each of his 9 friends and has 24 left for himself. How many mangoes were there altogether in the basket ?

(14) A train does 64 Kilometres in one hour. How far does it go in 7 hours ?

(15) John's, Peter's and David's ages add up to 32 years. What will their ages add up to 10 years later ?

(16) I go to the post office and buy twenty-four 8-naya-paisa stamps. How much must I pay altogether to the stamp-seller ?

(17) I buy six 15-naya-paisa stamps; 17 postcards at 6 n.p. each, and seven 8-naya-paisa stamps. How much must I pay altogether to the stamp-seller ?

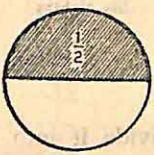
(18) A box contains 5 gross pencils. If they are made into bundles of a dozen each, how many bundles will there be ?

(19) In October of one year we had 8 more class days than holidays. How many class days had we ?

(20) Mary has 75 picture postcards and Ann 225 stamps. Mary agrees to exchange 1 postcard for 4 stamps. If after the exchange Mary has 39 postcards, how many stamps has Ann got ?

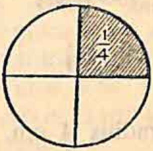
EIGHTHS

(i)



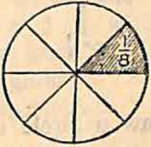
The shaded portion is $\frac{1}{2}$ of the whole.

(ii)



The shaded portion is $\frac{1}{4}$ of the whole.

(iii)



The shaded portion is $\frac{1}{8}$ of the whole.

(i) The shaded portion$=\frac{1}{2}$.

Into how many parts must I divide it in order to get $\frac{1}{4}$s?

How many $\frac{1}{4}$s are there in a $\frac{1}{2}$? We can write$=\frac{1}{2}=\frac{2}{4}$.

(ii) The shaded portion$=\frac{1}{4}$.

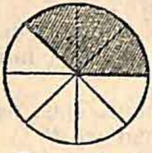
Into how many parts must I divide it in order to get $\frac{1}{8}$s?

How many $\frac{1}{8}$s are there in a $\frac{1}{4}$?

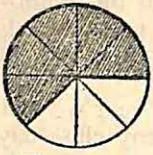
How many $\frac{1}{8}$s are there in a $\frac{1}{2}$?

We can write $\frac{1}{4}=\frac{2}{8}$ also $\frac{1}{2}=\frac{4}{8}$.

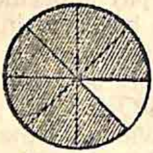
What part of the whole is the shaded portion?



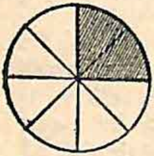
Three eighths $\frac{3}{8}$



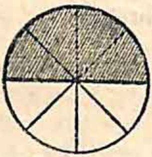
Five eighths $\frac{5}{8}$



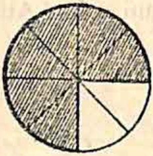
Seven eighths $\frac{7}{8}$



Two eighths $\frac{2}{8}$ or $\frac{1}{4}$



Four eighths $\frac{4}{8}$ or $\frac{1}{2}$



Six eighths $\frac{6}{8}$ or $\frac{3}{4}$

(1) Draw a circle of radius 4 cm. Divide it into 4 equal parts.

(2) Draw a circle of radius of 3 cm. Divide it into 8 equal parts.

(3) Draw a circle of radius 4 cm. Shade 1/8 of the circle.

(4) Draw a circle of radius $4\frac{1}{2}$ cm. Shade (i) 3/8 (ii) 7/8 of the circle.

(5) Draw a square of side 6 cm. Divide it into 4 equal parts.

(6) Draw a square of side 8 cm. Divide it into 8 equal parts.

(7) Draw a square of side 6 cm and divide it into 8 equal parts. Shade 5/8 of the square.

(8) Draw a rectangle of sides 8 cm and 6 cm, and divide it into eight equal parts. Shade $\frac{3}{8}$ of the rectangle. What fraction of the rectangle is left unshaded ?

(Addition and Subtraction)

8 eighths=1 whole.

$7\frac{5}{8}+3\frac{3}{4}$ Remember to write $\frac{3}{4}$ as $\frac{6}{8}$.

$$\begin{array}{r} 7\frac{5}{8} \\ +3\frac{6}{8} \\ \hline 11\frac{3}{8} \\ \hline \end{array}$$

5 eighths+6 eighths=11 eighths.
11 eighths=1 whole+3 eighths.
Put down $\frac{3}{8}$ and carry 1.

$7\frac{3}{8}-3\frac{3}{4}$

$$\begin{array}{r} 7\frac{3}{8} \\ -3\frac{6}{8} \\ \hline 3\frac{5}{8} \\ \hline \end{array}$$

We cannot take 6 eighths from 3 eighths, so we add 1 whole or 8 eighths to the top line.
We now have 11 eighths.
6 eighths from 11 eighths=5 eighths.
We must also add 1 to the lower line; so instead of 3 we read 4.
4 from 7 leaves 3.

---

(1) $3\frac{3}{8}+4\frac{5}{8}$.
(2) $3\frac{3}{8}+4\frac{7}{8}$.
(3) $3\frac{3}{8}+4\frac{3}{4}$.
(4) $7\frac{3}{8}+5\frac{1}{4}$.
(5) $5\frac{1}{2}+3\frac{3}{8}$.
(6) $5\frac{1}{2}—3\frac{3}{8}$.
(7) $5\frac{1}{4}—3\frac{3}{8}$.
(8) $6\frac{1}{2}—3\frac{3}{4}$.
(9) $7\frac{1}{2}—3\frac{5}{8}$.
(10) $7\frac{1}{2}—4\frac{1}{4}$.
(11) $9\ —2\frac{1}{8}$.
(12) $8\ —2\frac{3}{4}$.
(13) If I first walk $3\frac{1}{2}$ Km, then $2\frac{1}{8}$ Km, how far shall I walk altogether ?

PARTS OF A WHOLE

Instead of saying '4 times 9 is 36', we can say 'a quarter of 36 is 9'.
We write this: $\frac{1}{4}$ of $36=9$.
Instead of saying '9 times 7 is 63', we can say 'one-ninth of 63 is 7'.
We write this: $\frac{1}{9}$ of $63=7$.

(1) Write these statements in another way:
9 times 8=72. 6 times 32=192. 12 times 45=540.
6 times 5=30. 5 times 43=215. 7 times 12= 84.
5 times 7=35. 8 times 25=200. 12 times 12=144.

(2) Complete these :
$3=\frac{1}{6}$ of——; —— $=\frac{1}{7}$ of 42; $15=\frac{1}{5}$ of——.
$6=\frac{1}{5}$ of——; —— $=\frac{1}{8}$ of 56; $72=\frac{1}{5}$ Of——.
$7=\frac{1}{8}$ of——; —— $=\frac{1}{9}$ of 72; $243=\frac{1}{5}$ of——.
$9=\frac{1}{2}$ of——; —— $=\frac{1}{11}$ of 121; $25=\frac{1}{8}$ of——.

(3) $\frac{1}{8}$ of Re. 1 =
$\frac{1}{5}$ of Rs. 10 =
$\frac{1}{8}$ of Rs. 16 =
$\frac{1}{8}$ of Rs. 2 =
$\frac{1}{5}$ of Rs. 10 =
$\frac{1}{7}$ of 14 metres =
$\frac{1}{9}$ of 18 Kg =
$\frac{1}{4}$ of 2 Kg =
$\frac{1}{5}$ of 25 cm =
$\frac{1}{3}$ of 2 Kg =
$\frac{1}{11}$ of Rs. 5.50 =
$\frac{1}{15}$ of Rs. 3 =

$\frac{1}{5}$ of Rs. 2.25 =
$\frac{1}{11}$ of Rs. 17.60 =
$\frac{1}{7}$ of 42 minutes =
$\frac{1}{10}$ of an hour =
$\frac{1}{6}$ of 1 hour =
$\frac{1}{3}$ of 42 min. =
$\frac{1}{8}$ of 1 hr. 20 min. =
$\frac{1}{16}$ of Rs. 17.60 =
$\frac{1}{14}$ of Rs. 42 =
$\frac{1}{7}$ of 3 m 43 cm =
$\frac{1}{9}$ of 7 1 29 cl =
$\frac{1}{12}$ of 168 =

(*Oral*)

Instead of 20 minutes past 9 o'clock—
we write 9-20.
Instead of 5 minutes past 9 o'clock—
we write 9-05.
9-20 9-05 9-40 9-50
9-40 means 40 minutes past 9 o'clock
or 20 minutes to 10 o'clock.
9-50 means 50 minutes past 9 o'clock
or 10 minutes to 10 o'clock.

(1) Show these times on the clock and read them.
8-15; 6-20; 6-40; 5-10; 5-50; 7-30; 8-35;
5-45; 6-05; 6-50; 6-55; 11-25; 12-15; 1-05;
1-50; 2-05; 2-40; 3-00.

(2) It is now 9-20. 20 minutes later it will be 9-40.
It is now 8-40. 20 minutes later it will be ——
,, ,, ,, 8-50. 15 ,, ,, ,, ,, ,, ——
,, ,, ,, 7-30. 50 ,, ,, ,, ,, ,, ——
,, ,, ,, 6-25. 25 ,, ,, ,, ,, ,, ——
,, ,, ,, 6-45. 15 ,, ,, ,, ,, ,, ——
,, ,, ,, 6-50. 15 ,, ,, ,, ,, ,, ——
,, ,, ,, 6-05. 20 ,, ,, ,, ,, ,, ——
,, ,, ,, 7-35. 25 ,, ,, ,, ,, ,, ——
,, ,, ,, 7-20. — ,, ,, ,, ,, ,, 8-00.
,, ,, ,, —— 30 ,, ,, ,, ,, ,, 7-00.
,, ,, ,, —— 25 ,, ,, ,, ,, ,, 7-30.
,, ,, ,, —— 20 ,, ,, ,, ,, ,, 7-05.
,, ,, ,, —— 40 ,, ,, ,, ,, ,, 8-15.

RACES 6

(i)

(1) 356×43.
(2) 16 Kg 404 gm÷12.
(3) Rs. 6·10×9.
(4) 7325÷6.
(5) 18 Kg 46 gm÷7.

(ii)

(1) 322÷7=
(2) ÷8=716.
(3) ×16=736.
(4) 1236+ =6114.
(5) 1325— = 697.
(6) 583+17—583=

(iii)

(1)

Rs.		Rs.		Rs.
3·56	+	3·79	=	
2·19	+	4·86	=	
5·26	+	3·23	=	

(2) 16 litres 47 cl÷9.
(3) 475×98.
(4) 65 metres 4 cm÷8.
(5) Rs. 20·13÷9.

(iv)

(1) 7359× 9=
(2) ×11=693.
(3) ÷12=84.
(4) 6116+ =10000.
(5) 6969— = 5053.
(6) 6060— = 5999.

(v)

Write in words:

(1) 763,763.
(2) 7,07,804.
(3) 700,480.

Write in figures :

(4) Eight hundred thousand and sixty-five.
(5) Nine lakhs, seven hundred and seventy.
(6) Fifty-five thousand, five hundred and five.

(1) There are 78 rows of chairs with 13 in each row. How many chairs are there in all ?

(2) A train was due at 9-45. It arrived, however, at 10-12. How many minutes late was it ?

(3) A gramophone and 12 records cost Rs. 144·00. The gramophone costs Rs. 90. What does each record cost ?

(4) A fountain-pen and seven propelling pencils cost Rs. 24·70. The pencils cost Rs. 1·35 each. What does the pen cost ?

(5) Add $7\frac{3}{8}$ and $6\frac{7}{8}$.

(6) Take $6\frac{3}{8}$ from $8\frac{1}{4}$.

(7) Among how many children can I share 981 stamps if I give them 9 each ?

(8) A jug holds 75 cl of water. How much water will 24 jugs of the same size hold altogether ?

(9) How many stamps must I have in order to be able to give 78 children 17 each ?

(10) Eight iron balls, equal in weight, together weigh 19 Kg 164 gm. What does each ball weigh ?

(11) What is the total weight of 16 books if each book weighs 475 gm ?

(12) Divide Rs. 7217 between 2 men so that one will receive Rs. 717 more than the other.

Acting Treasurer for the Class

(1) The class has subscribed Rs. 60 to be spent on sports' gear. You are appointed treasurer, and so you have to keep the accounts. You must show, item by item, how much has been spent and what the balance is.

Expenditure

6 hockey sticks at	Rs. 3·55 each.
4 rubber balls at	Rs. 4·50 a doz.
3 cricket bats at	Rs. 5·37 each.
8 skipping ropes at	Rs. 2·20 each.
Balance	

(2) The class has been given Rs. 65 for a picnic. They must subscribe the balance of expenditure themselves.

Expenditure

For bus hire	Rs. 22·50.
5 doz. small cakes at	Rs. 1·35 a doz.
Two 2-Kg cakes at	Rs. 3·70 a Kg.
8 doz. sandwiches at	Rs. 3·25 a doz.
3 Kg of chocolates at	Rs. 11·50 a Kg.
Tea, sugar and milk	Rs. 5·85
Subscribed by the class—	

(3) There are 22 children and their parents have subscribed Rs. 3 each for sports' prizes.

Expenditure

2 E.P.N.S. cups at	Rs. 7·50 each.
7 rose bowls at	Rs. 2·25 each.
3 tennis racquets at	Rs. 6·75 each.
9 consolation prizes at	Re. 0·80 each.
Balance	

(1) Write down your answers only:

17×3; 21×2; 25×3; 19×3.
18×4; 19×4; 26×2; 29×2.
23×4; 29×3; 33×3; 24×3.
15×6; 17×5; 35×3; 26×4.
17×4; 23×4; 34×2; 28×2.
32×3; 27×3; 17×6; 37×2.
22×4; 27×4; 28×3; 36×3.
35×2; 31×5; 36×2; 31×3.

(2) **Close this book. Teacher will call out, one at a time, the sums given above (but not in the same order). Do each one in your head. Write down your answers as quickly as you can and listen for the next sum.*

How many times can 23 be taken from 85?

Work this sum in your head like this:

Try twice: $23\times2=46$. Perhaps 23 can be taken once more.

So, try 3 times: $23\times3=69$, 23 can be taken 3 times. Perhaps it can be taken once more.

So, try 4 times: $23\times4=92$, 23 cannot be taken 4 times. *Ans*: Up to 3 times.

Now work these in the same way:

(3) How many times can

22 be taken from 46?
24 be taken from 48?
24 be taken from 52?
25 be taken from 80?
33 be taken from 99?
33 be taken from 100?
23 be taken from 70?

34 be taken from 68?
34 be taken from 72?
34 be taken from 80?
37 be taken from 74?
37 be taken from 80?
37 be taken from 90?
32 be taken from 70?

(4) Answer like this: $49\div21=2+$something over.

$50\div22=$ $85\div25=$ $67\div32=$
$60\div22=$ $72\div23=$ $100\div32=$
$70\div22=$ $75\div27=$ $90\div35=$
$50\div23=$ $83\div27=$ $94\div31=$

(1) From a basket of 105 oranges, share as many as you can equally among 32 boys. How many oranges will be left over?

3 oranges each.	32 into 105 will go 3 times.
———	We write down the 3.
32) 105	Now $32 \times 3 = 96$.
96	So we write 96 under 105
———	and subtract.
9 oranges over.	This leaves 9 oranges over.

(2) Work sum No. 1 with 95 oranges and 23 boys.
(3) ,, ,, ,, ,, ,, 100 ,, ,, 23 ,,
(4) ,, ,, ,, ,, ,, 96 ,, ,, 22 ,,
(5) ,, ,, ,, ,, ,, 120 ,, ,, 31 ,,
(6) ,, ,, ,, ,, ,, 111 ,, ,, 25 ,,
(7) ,, ,, ,, ,, ,, 78 ,, ,, 19 ,,
(8) ,, ,, ,, ,, ,, 78 ,, ,, 17 ,,
(9) ,, ,, ,, ,, ,, 83 ,, ,, 27 ,,

DIVISION

(1) 17) 55
(2) 18) 75
(3) 21) 83
(4) 27) 83
(5) 21) 87
(6) 23) 97
(7) 22) 100
(8) 25) 120

(9) 99÷24.
(10) 99÷33.
(11) 100÷32.
(12) 128÷32.
(13) 110÷35.
(14) 148÷37.
(15) 92÷23.
(16) 101÷13.

(17) 65÷17.
(18) 79÷19.
(19) 85÷20.
(20) 95÷30.
(21) 95÷31.
(22) 100÷34.
(23) 83÷13.
(24) 96÷14.

985÷23.

$$\begin{array}{r} 42 \\ 23\overline{)\,985} \\ 92 \\ \hline 65 \\ 46 \\ \hline 19 \text{ rem.} \\ \hline \end{array}$$

We start by dividing 23 into 98
23 into 98 goes 4 times.
Put down 4 in the answer line.
23×4=92. Put down 92 and subtract from 98. Now bring down the 5.

We now divide 23 into 65. 23 into 65 goes twice.

23×2=46. Subtract 46 from 65.

Ans. 42 times, remainder 19.

EXERCISES

(1) 985÷24.
(2) 763÷23.
(3) 709÷23.
(4) 854÷21.
(5) 425÷17.
(6) 634÷24.
(7) 1190÷34.
(8) 857÷37.
(9) 609÷29.
(10) 807÷33.
(11) 777÷19.
(12) 777÷31.
(13) 863÷38.
(14) 621÷27.
(15) 800÷39.
(16) Share Rs. 759 equally among 23 men.
(17) I have Rs. 775. I can give —— men Rs. 25 each.
(18) 837=27× ——.
(19) 495= —— ×33.
(20) From a —— litre tank I can fill 37 four-litre tins and have 3 litres over.
(21) If an iron ball weighs 27 Kg, thirty-three iron balls will weigh —— Kg.
(22) A tricycle costs Rs. 28. With Rs. 572 a man can buy —— tricycles and he will have Rs. —— over.
(23) A bucket can hold 24 litres. How many buckets of water will be needed to fill a cistern which can hold 504 litres?
(24) How many pieces of wire each 23 metres long will have to be joined to make a piece 552 metres long?

(1) Write down your answers only :

21×7
23×8
25×6
27×4
23×9

23×7
19×6
19×9
27×6
28×9

35×6
37×7
34×6
33×8
28×7

32×7
33×5
29×4
29×9
27×8

(2) How many times can 21 be taken from 180 ?

Work this sum in your head like this :

Since 2 tens will go into 18 tens 9 times,

try 9.21×9=189, so 9 is too much.

Then try 8.21×8=168.

So 21 can be taken up to 8 times.

Now work these sums in the same way :

How many times can

28 be taken from 180 ?
25 ,, ,, ,, 180 ?
23 ,, ,, ,, 190 ?
23 ,, ,, ,, 170 ?
27 ,, ,, ,, 250 ?
29 ,, ,, ,, 250 ?

27 be taken from 200 ?
33 ,, ,, ,, 300 ?
32 ,, ,, ,, 250 ?
37 ,, ,, ,, 180 ?
37 ,, ,, ,, 310 ?
38 ,, ,, ,, 330 ?

(3) A man walks 21 Km a day. He will take —— days and a part of a day to walk 180 Km.

(4) A man walks 23 Km a day. He will take —— days and a part of a day to walk 200 Km.

(5) A car travels 33 Km an hour. It will take —— hours and a part of an hour to travel 160 Km.

(6) —— pieces of rope each 25 feet long will be needed to stretch across a distance of 200 feet.

(7) I have —— pictures. I shall use 27 pages of my album if I paste 19 pictures on each page.

(8) I have 414 pictures. I shall use —— pages of my album if I paste 18 pictures on each page.

Find the remainder after 27 is subtracted as many times as possible from 235.

$$\begin{array}{r@{\,}r} & 8 \\ \cline{2-2} 27) & 2\,3\,5 \\ & 2\,1\,6 \\ \cline{2-2} & 1\,9 \end{array}$$

Ans. 19 remains.

Find the remainders in the following division sums :

1. 1856÷21.
2. 1734÷23.
3. 2156÷25.
4. 2370÷27.
5. 8156÷34.
6. 2135÷33.
7. 3120÷32.
8. 3205÷32.
9. 3375÷33.
10. 3006÷23.
11. 7165÷32.
12. 7160÷22.
13. 7105÷35.
14. 7005÷35.
15. 2167÷23.
16. 1856÷19.
17. 8134÷19.
18. 7600÷18.
19. 7006÷17.
20. 3135÷26.

$$\begin{array}{r@{\,}r} & 8\,2 \\ \cline{2-2} 23) & 1\,8\,8\,6 \\ & 1\,8\,4 \\ \cline{2-2} & 4\,6 \\ & 4\,6 \\ \cline{2-2} \end{array}$$

23 into 1886 goes 82 times exactly.

Check. 82 × 23

$$\begin{array}{r} 8\,2 \\ 2\,3 \\ \hline 1\,6\,4\,0 \\ 2\,4\,6 \\ \hline 1\,8\,8\,6 \\ \hline \end{array}$$

We get back 1886; so the division must have been correct.

In the following sums the numbers divide exactly. Check your answers by multiplication in the way just shown.

513÷19.
513÷27.
484÷22.
832÷26.
255÷17.
529÷23.
924÷28.
2706÷33.
1800÷24.
1380÷15.
2701÷27.
3105÷37.
1885÷29.
2666÷31.
1012÷23.

(1) Subtraction undoes addition.

$7+8=15$ $\qquad$ $15-8=7.$

$15-7=8.$

$$\begin{array}{r}325\\+249\\\hline 574\\\hline\end{array}\qquad\qquad\begin{array}{r}574\\-325\\\hline 249\\\hline\end{array}\qquad\qquad\begin{array}{r}574\\-249\\\hline 325\\\hline\end{array}$$

Add and then check your answer in two ways :

$$(a)\ \begin{array}{r}325\\639\\\hline \\\hline\end{array}\qquad\qquad(b)\ \begin{array}{r}808\\909\\\hline \\\hline\end{array}\qquad\qquad(c)\ \begin{array}{r}7816\\9618\\\hline \\\hline\end{array}$$

(2) Addition undoes subtraction.

$19-12=7;\quad 12+7=19.$

Check. $\begin{array}{r}654\\-276\\\hline 378\\\hline\end{array}$ Add 276 to 378, and you get back 654.

Subtract and then check by adding:

$$(a)\ \begin{array}{r}674\\289\\\hline \\\hline\end{array}\qquad\qquad(b)\ \begin{array}{r}700\\325\\\hline \\\hline\end{array}\qquad\qquad(c)\ \begin{array}{r}6305\\5036\\\hline \\\hline\end{array}$$

(3) Division undoes multiplication.

$3\times6=18;\qquad 18\div6=3.$

Work and check your answers.

(*a*) $37\times26.$ (*c*) $67\times28.$ (*e*) $275\times32.$

(*b*) $53\times24.$ (*d*) $93\times31.$ (*f*) $483\times37.$

INDIVIDUAL WORK 7

(1) Add :

35162	73196	85632	35167
43099	2154	7990	43182
32154	289673	735160	631509
69108	57095	888888	983215

(2) Subtract :

315637	730001	813125	85006
157835	581135	509938	58008

(3)

		(*a*)	(*b*)	(*c*)	(*d*)	(*e*)	(*f*)
(i)	763159	×6;	×8;	×11;	×10;	× 9;	× 7.
(ii)	801056	×7;	×5;	× 6;	× 9;	×12;	×10.
(iii)	320057	×9;	×7;	× 4;	×12;	×16;	×10.
(iv)	765984	×7;	×8;	× 5;	×16;	×12;	×10.
(v)	863509	×7;	×8;	× 5;	×16;	×12;	×10.

(4)

		(*a*)	(*b*)	(*c*)	(*d*)	(*e*)
(i)	85326	÷6;	÷8;	÷ 9;	÷10;	÷ 7.
(ii)	58007	÷6;	÷8;	÷ 9;	÷11;	÷12.
(iii)	50009	÷8;	÷7;	÷11;	÷12;	÷16.
(iv)	90005	÷8;	÷7;	÷11;	÷12;	÷16.
(v)	73982	÷8;	÷7;	÷11;	÷12;	÷16.

(5) Add (first add upwards, then check by adding downwards :

	(*a*) Rs.	(*b*) Rs.	(*c*) Rs.
(i)	15·37	26·74	25·63
	47·66	83·47	12·09
	83·92	47·83	19·13
	54·65	56·91	38·97

	(*a*) Rs.	(*b*) Rs.	(*c*) Rs.
(ii)	15·12	25·39	31·81
	17·99	17·91	52·23
	28·26	8·88	83·96
	91·47	28·93	29·86

		(*a*)	(*b*)	(*c*)	(*d*)	(*e*)
(6) (i)	Rs. 17·25	×10;	×8;	×9;	×12;	×16.
(ii)	Rs. 327·37	×10;	×8;	×9;	×12;	×16.
(iii)	Rs. 423·54	× 8;	×7;	×9;	×11;	×16.
(iv)	Rs. 635·69	× 8;	×7;	×9;	×12;	×16.

		(*a*)	(*b*)	(*c*)	(*d*)
(7) (i)	Rs. 95·04	÷8;	÷9;	÷12;	÷11.
(ii)	Rs. 403·20	÷8;	÷9;	÷ 5;	÷ 7.
(iii)	Rs. 60·48	÷8;	÷9;	÷ 7;	÷12.

	(*a*)	(*b*)	(*c*)	(*d*)
(8)	357×73;	892×64;	835×79;	904×27.
	817×69;	876×59;	6590×43;	1794×67.
	7050×47;	9836×67;	8305×76;	8037×89.

(9) Add:

	m	cm		Kg	gm		l	cl
(*a*)	17	25	(*b*)	72	224	(*c*)	59	49
	42	98		87	956		94	81
	79	89		67	879		75	6
	45	51		85	989		99	89

(10) Subtract :

	Kg	gm		Kg	gm		Kg	gm
(*a*)	74	75	(*b*)	47	16	(*c*)	87	78
	35	549		29	426		59	965

	m	cm		m	cm		l	cl
(*d*)	79	6	(*e*)	87	7	(*f*)	25	9
	46	89		49	28		19	12

	l	cl		l	cl		m	cm
(*g*)	95	8	(*h*)	64	7	(*i*)	39	9
	49	11		39	28		28	76

(11) (*a*) 884÷26. (*b*) 851÷23. (*c*) 1316÷28.
(*d*) 2263÷31. (*e*) 2108÷34. (*f*) 3370÷37.
(*g*) 625÷25. (*h*) 2740÷33. (*i*) 2600÷27.
(*j*) 2808÷36. (*k*) 1045÷19. (*l*) 1071÷17.

Example (1) :

If 4 books cost Rs. 16, what do 16 books cost ?

	Books	*Rs.*
	4 books cost	Rs. 16.
Then	1 book costs	Rs. 16÷4=Rs. 4.
So	16 books cost	Rs. 4×16=Rs. 64.
		Ans. Rs. 64.

Example (2):

If 5 Kg of sweets cost Rs. 15, what do 25 Kg cost ?

	Sweets	*Rs.*
	5 Kg sweets cost	Rs. 15.
Then	1 Kg sweets cost	Rs. 15÷ 5=Rs. 3.
So	25 Kg sweets cost	Rs. 3×25=Rs. 75.
		Ans. Rs. 75.

EXERCISES

(1) 7 books cost Rs. 42, what do 12 books cost ?

(2) 12 litres of oil cost Rs. 24, what do 9 litres cost ?

(3) 4 Kg of sweets cost Rs. 12, what do 24 Kg cost ?

(4) 4 bags of coal weigh 84 Kg. What do 12 such bags weigh ?

(5) The school fees for 4 pupils in a class are Rs. 48. What are the total fees for the whole class of 12 ?

(6) A car does 84 Kilometres in 2 hours. If it travels at the same speed, what will it do in 5 hours ?

(7) 6 metres of cloth cost Rs. 24. What do 36 metres cost ?

(8) 2 cycles cost Rs. 350. What do 6 cycles cost ?

(9) A man saves Rs. 12 in 3 weeks. How much will he save in 52 weeks ?

(10) A man earns Rs. 75 in 3 weeks. How much will he earn in 8 weeks ?

(11) 20 tins of boot polish cost Rs. 15. Find the cost of 2 dozen tins.

(12) The train fare for 8 Kilometres is 64 n.p. What is the fare for 48 Kilometres ?

(13) 10 Kg of coffee cost Rs. 75. What is the cost of 55 Kg ?

(14) There are 450 mangoes in 9 baskets. How many are there in 7 such baskets ?

(15) Nine tins hold 162 litres of oil. How much will 5 such tins hold ?

(16) Seven watches cost Rs. 896. Find the cost of 11 such watches.

(17) An aeroplane flies 65 Km in 13 minutes. How far will it fly in 25 minutes ?

(18) Four litres of varnish are used for 56 desks. How many desks can be varnished with 22 litres ?

THE RIGHT ANGLE

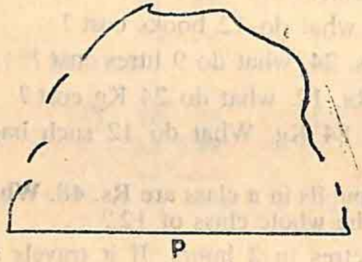


Fig. 1

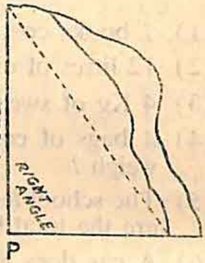


Fig. 2

On the straight edge of your piece of paper, dot a point *P*. Then at *P*, fold the edge over on itself as you see it done in Fig. 2. Press the fold so as to leave a crease. Then cut along the crease with a pair of scissors.

We now have two paper right angles. Trim them off by making a straight cut across as shown by the dotted line.

Use one of your paper right angles to test whether the corners of your book, the corners of the desk and other corners are right angles.

In this Fig. (3) the lines *PH* and *MN* do not form right angles.

Place a piece of tracing paper on the diagram and trace out the lines. Now at *P*, fold the line *MN* on itself. Does the crease appear along *PH ?*

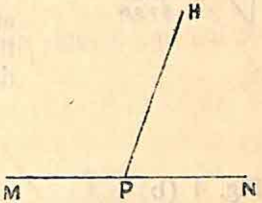


Fig. 3

It is not always convenient or possible to fold a line on itself. To draw a right angle we use a 'guide' like the paper right angle which we have just cut out.

The 'guide' is called a set square. So that it will not bend or get easily spoilt, it is usually made of metal or thick celluloid. (Fig. 5 on page 87 shows a set square.) We can make our own set square by pasting our paper right angle on to a piece of cardboard and cutting out the shape. Do this.

RECTANGLES AND SQUARES

Fig. 4 (a) shows a rectangle or oblong. All four angles of the rectangle or oblong are right angles and its opposite sides are equal.

When all the sides are equal, we call the rectangle a *square*.

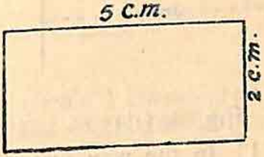


Fig. 4 (a)

Let us use our rulers and set squares to draw a rectangle with its longer sides 5 cm each and its shorter sides 2 cm each.

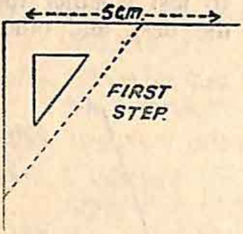


Fig. 4 (b)

Fig 4 (b) shows how we start.

We first draw a line 5 cm long. We then place our set square at one end, with one edge along the line. We use the other edge to draw a line at right angles.

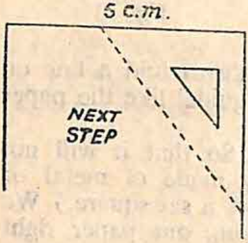


Fig. 4 (c)

Fig. 4(c) shows how the set square is used to draw a right angle at the other end.

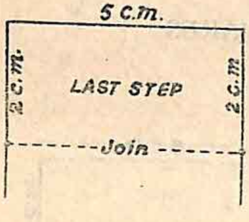


Fig. 4 (d)

Fig. 4 (d) shows 2 cm marked off on both lines. The ends are then joined to complete the rectangle.

(1) In the way just shown draw :
  (*a*) A rectangle with sides 6 cm and 3 cm.
  (*b*) A rectangle with sides 5½ cm and 3½ cm.
  (*c*) A square with sides 7 cm.
  (*d*) A square with sides 8½ cm.

Suppose we wish to show by means of a drawing a rectangle which has sides 60 metres and 30 metres.

We can let 1 cm stand for 10 metres.

Then 6 cm will stand for 60 metres and 3 cm will stand for 30 metres.

We then can draw a rectangle with sides 6 cm and 3 cm as shown in Fig. 6.

We say that the figure has been drawn to scale. The scale is written
1 cm=10 m;
here "=" means "stands for".

If the scale were 1 cm =5 metres then 60 metres would have to be drawn as 12 cm and 30 metres as 6 cm.

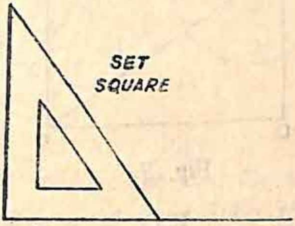
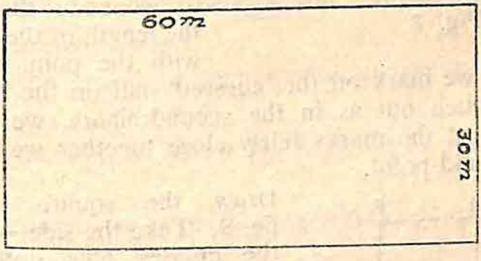


Fig. 5

(2) Draw a rectangle with sides 96 metres and 72 metres using the scale 1 cm=12 metres.



(3) Draw

Fig. 6

(a) A square of sides 36 metres (Scale 1 cm=9m).
(b) A rectangle with sides 72 cm and 48 cm (Scale 1 cm =6 cm).
(c) A rectangle with sides 84 cm and 108 cm (Scale 1 cm=12 cm).
(d) A rectangle with sides 90 metres and 54 metres.
(e) A square with sides 42 metres.

(4) The following are measurements of drawings of rectangles done to scale. What are the actual measurements?

(*a*) length 5 cm, width 3 cm. Scale 1 cm = 7 metres.
(*b*) length 9 cm, width 7 cm. Scale 1 cm = 11 metres.

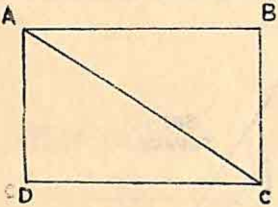


Fig. 7

(5) The line *AC* is called a *diagonal*. How many diagonals has a rectangle? Draw a rectangle; measure the diagonals.

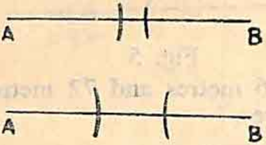


Fig. 8

(6) Fig. 8 shows how the middle (or mid-) point of a line is found without measuring with a ruler. We first stretch our compasses to what we think is half the length of the line. Then with the point on *A* and *B* in turn, we mark off the 'guessed' half on the line. If our guess is much out as in the second figure, we try again. When we get the marks fairly close together we can easily guess the mid-point.

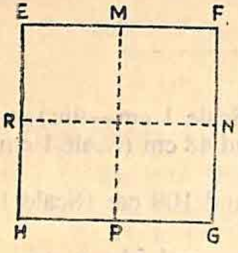


Fig. 9

Draw the square shown in fig. 9. Take the side = 5 cm. Get the creases (the dotted lines) by folding. Draw the diagonals. What do you notice?

John is playing at toy soldiers. The Enemy's cannon are 7 metres apart. Their positions are shown at *A* and *B* in fig. 10.

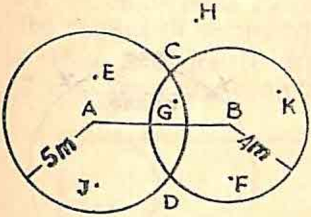


Fig. 10

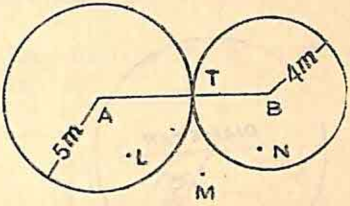


Fig. 11

The cannon at *A* can carry 5 metres, the cannon at *B* 4 metres. How far from the cannon at *A* must John place his soldiers so that they may not be hit by it?

Mark a few points at which the soldiers would be just out of the firing range of cannon *A*.

What is the boundary between the danger area and the safety area for cannon *A*?

What is the boundary between the danger area and the safety area for cannon *B*?

Can a soldier at *F* be hit by cannon *A*? And by cannon *B*?

Can a soldier at *J* be hit by cannon *A*? And by cannon *B*?

Can a soldier at *H* be hit by either cannon?

What about a soldier at *G*?

Where will a soldier be open to fire from both cannon?

There are two points at which a soldier is only just within reach of both cannon. Mark them.

Look at fig. 12. Notice that a line has been drawn from the centre of the circle to the boundary. Such a line is called a *radius*. The boundary is called the *circumference* of the circle.

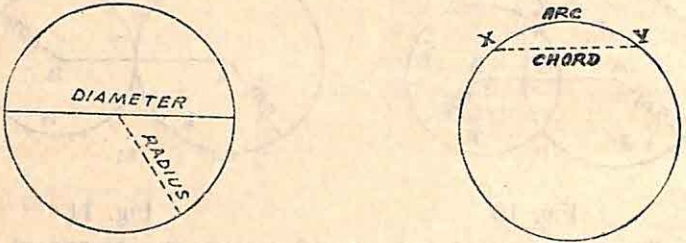


Fig. 12

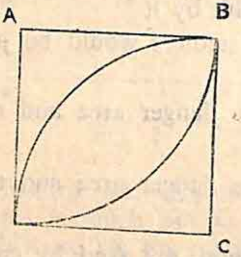


Fig. 13

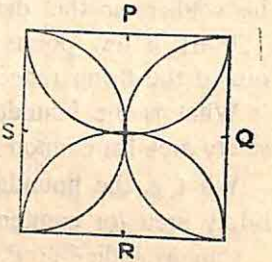


Fig. 14

Draw a circle of radius 5 cm. Take any two points *X* and *Y*, on the circumference. A part of the circumference, like the parts between *X* and *Y*, is called an *arc*. Join *X* to *Y* by a straight line. The straight line *XY* is called a *chord*. The longest chords that can be drawn are the ones that pass through the centre. They are called *diameters*.

Draw a diameter of your circle. Then draw another diameter at right angles to it. Mark off an arc which is half the circumference. Mark off a semi-circle (or half circle). Mark off a quarter circle.

Draw fig. 13. Take the side of the square to be 3 cm. The arcs are quarter-circles with their centres at *A* and *C*.

Draw fig. 14. First draw a square of side 5 cm. Mark off the mid-points *P, Q, R, S* of the sides. *P, Q, R, S* are the centres of semi-circles.

How is figure 16 drawn? The diameter of the circle is 7 cm. Draw the complete figure.

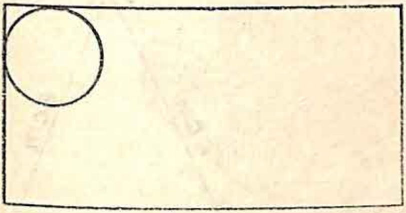


Fig. 15

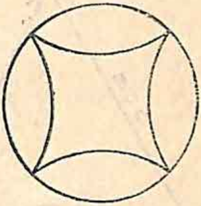


Fig. 16

See fig. 15. The sides of the rectangle are meant to be 12 cm by 8 cm and the diameter of the circle 4 cm. How many such circles can be fitted into the rectangle? Draw the rectangle and fit in the circles.

Look again at fig. 10. Imagine *A* and *B* to be two spots in the compound and that Mary has been told that she may make a circular garden plot of 5 m radius round *A* as centre and that John has been told that he may make one of 4 m radius round *B* as centre. Do you consider the arrangement a good one?

Look at fig. 11. Here the spots *A* and *B* are further apart. Is this a better arrangement? If the boundaries of the two plots are to just touch, how far apart must the centres be?

In a page of your exercise book take two points, *B* and *C*, 10 cm apart. Now find a point *A*, 8 cm from *B* and 6 cm from *C*. Where will all the points that are 8 cm from *A* lie? And all points 6 cm from *C*?

Draw triangles with the following sides :

(1) 9 cm, 6 cm, 5 cm.
(2) 8 cm, 7 cm, 6½ cm.
(3) 10 cm, 7½ cm, 5½ cm.
(4) 16 metres; 20 metres; 28 metres (to scale)
(5) 16 metres; 20 metres; 25 metres (to scale)

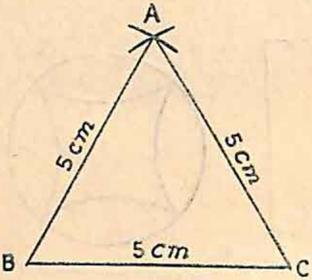


Fig. 17

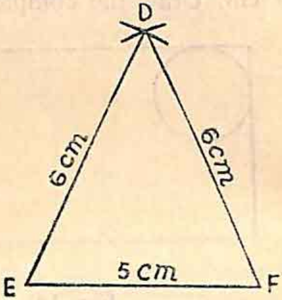


Fig. 18

See fig. 17. Notice that all the sides of the triangle are equal. A triangle with all its sides equal is called an *equilateral triangle.*

The triangle of fig. 18 has two of its sides equal. Such a triangle is called an *isosceles* triangle.

(1) Draw equilateral triangles with sides :
    (*a*) 7 cm, (*b*) 9 cm, (*c*) 5½ cm.
(2) Draw an isosceles triangle with its equal sides 8 cm long and the third side 6 cm long.
(3) Draw an isosceles triangle with its equal sides 6½ cm long and the third side 5½ cm long.
(4) Draw (to the scale 1 cm=2 metres) a figure showing the position of two toy cannons, A and B, 12 metres apart. Both their firing ranges are 8 metres. Shade in the space open to fire from both cannons.

Mark off the two points that are on the boundaries of the danger areas of the two cannon.

(5) Draw 4 circles of radius 3 cm each. With your coloured

pencil shade (a) $\frac{1}{4}$ of the first circle, (b) $\frac{1}{8}$ of the second circle, (c) $\frac{3}{4}$ of the third circle, (b) $\frac{5}{8}$ of the fourth circle. Use different coloured pencils for each shading.

(6) Draw a rectangle with sides 8 cm and 4 cm. Divide this rectangle into 8 equal parts. Now shade $\frac{3}{8}$ of the rectangle.

THE BOX AND THE CUBE

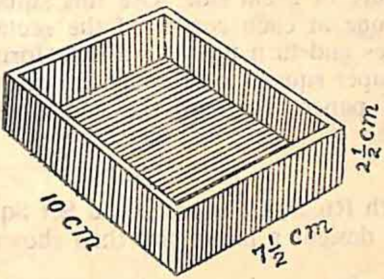


Fig. 19

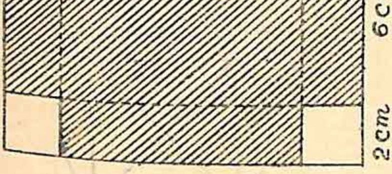


Fig. 20

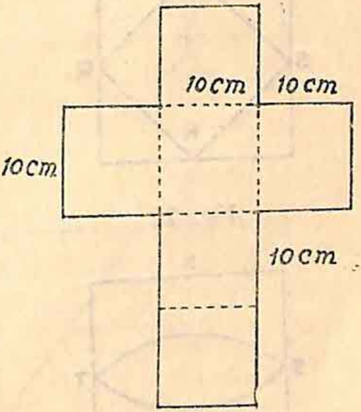


Fig. 21

Fig. 19 shows a box without a cover.
Fig. 20 shows the walls of the box turned down.

Notice the flattened box has the shape of a cross which fits into a rectangle. How long are the sides of the rectangle? Notice that if four squares are cut out from the corners we obtain the shape of the flattened box. How long are the sides of the squares?

On a large piece of thin cardboard of stiff paper draw a rectangle 12 cm by 10 cm. On a sheet of paper draw and cut out a square of 2 cm side. Use this square to mark off four squares one at each corner of the rectangle. Now cut out the squares and turn up the walls to form the box.

Use your paper square to draw fig. 21 on a piece of cardboard or stiff paper. Turn up the end squares to form a complete cube.

DESIGNS

(With Ruler, Compasses and Set Square)

Draw these designs a larger size than shown here.

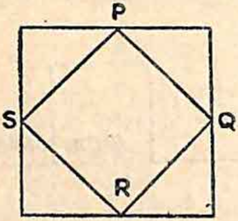


Fig. 22

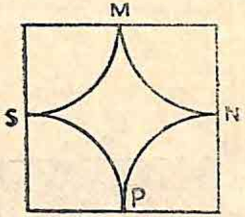


Fig. 23

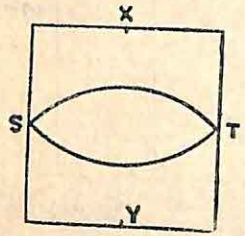


Fig. 24

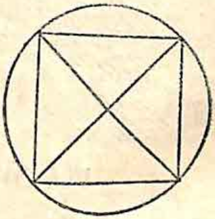


Fig. 25

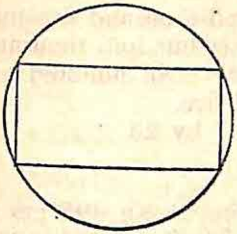


Fig. 26

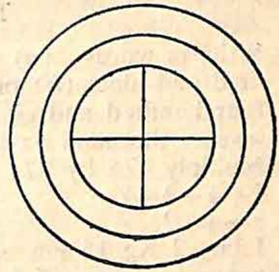


Fig. 27

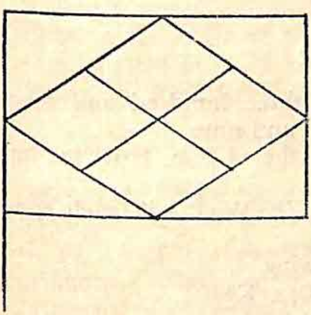


Fig. 28

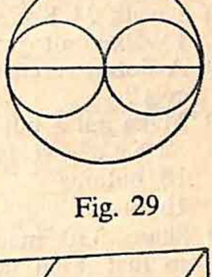


Fig. 29

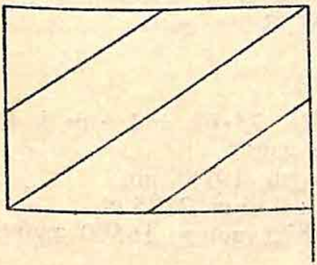


Fig. 30

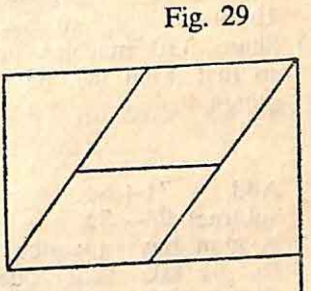


Fig. 31

TEST 1

(1) Write in words : (*a*) Four hundred thousand five hundred and nine; (*b*) one million, six hundred thousand, four hundred and eighty nine; (*c*) eight hundred and seventy thousand six hundred and five.

(2) Multiply 475 by 224. Divide 7107 by 23.

(3) $\frac{1}{2}+\frac{1}{4}+\frac{1}{8}=?$
$\frac{3}{4}-\frac{3}{8}=?$

(4) I buy 2 Kg 15 gm of lemon drops, 3 Kg 495 gm of peppermints, and 5 Kg 895 gm of toffee. What weight of sweets have I bought altogether ?

(5) If seven books cost Rs. 42, what is the cost of 43 books ?

TEST 2

(1) Subtract forty-five thousand three hundred and seventeen from sixty-nine thousand and nine.

(2) I walk $2\frac{1}{2}$ Km and then a further $\frac{3}{4}$ Km. How far have I walked altogether ?

(3) A dozen spoons cost Rs. 50·28. What will each spoon cost ?

(4) Make out a bill for the following :

2 Kg of sweets	at Rs. 3·50 a Kg.
18 buttons	at Rs. 1·40 a dozen.
16 buns	at Re. 0·40 each.

(5) Share 350 marbles between John, Henry and Dick so that John has 65 marbles more than each of the others.

TEST 3

(1) Add $7\frac{1}{2}+8\frac{3}{4}$.
Subtract $9\frac{1}{4}-5\frac{3}{4}$.

(2) A man buys a watch for Rs. 75·62 and sells it for Rs. 87·80. What does he gain ?

(3) Write in Kg and gm : 7586 gm, 19786 gm.
Write in litres and centilitres : 456 cl, 2875 cl.
Write in Km and metres : 7876 metres, 16500 metres.

(4) A man owes Rs. 400 to his brother. He pays back Rs. 25 a month. In how many months will he pay back all that he owes?
(5) Draw lines of the following lengths:
$2\frac{1}{2}$ cm, $7\frac{1}{2}$ cm, 9 cm, $6\frac{1}{2}$ cm, 11 cm.

TEST 4

(1) Multiply 356 by 125; 475 by 10.
Divide 7859 by 24; 1728 by 16.
(2) A cyclist does 8 Km 175 metres in 1 hour. If he travels at the same rate, how far will he travel in 9 hours?
(3) How many pieces of wire 12 cm long can be cut from a wire 6 m 72 cm long?
(4) Draw a rectangle of sides 12 cm and 8 cm. Divide it into squares of sides 1 cm.
(5) Draw an equilateral triangle of side 6 cm.

TEST 5

(1) Multiply 756 by 120.
Divide 7943 by 21.
(2) If 12 Kg of tea cost Rs. 84, what is the cost of 8 Kg?
(3) Make out a bill for the following:
3 metres of blazer cloth at Rs. 15 a metre.
42 brass buttons at Rs. 6·40 a dozen.
6 metres of elastic at Rs. 1·60 a metre.
(4) Add: $4\frac{1}{8}+5\frac{1}{2}+\frac{3}{4}$.
Subtract: $5\frac{3}{8}—2\frac{3}{4}$.
(5) Draw a circle of 4 cm radius and divide it in 8 parts. Shade $\frac{5}{8}$ of the circle with your pencil.

TEST 6

(1) What must be added to 356 to make 742?
(2) By what must 23 be multiplied to give 138?
(3) There are 3 baskets each containing 5 dozen mangoes. Thirty-six are bad and the rest are shared equally among 9 people. How many will each person get?

(4) Draw an isosceles triangle with its equal sides 7 cm long and the third side $4\frac{1}{2}$ cm long.
(5) Draw a circle of 5 cm radius and draw any pattern inside the circle using your compasses.

TEST 7

(1) For what figures do the stars stand?

$$\begin{array}{r} ** \\ 34 \\ \hline 1440 \\ 192 \\ \hline 1632 \end{array}$$

(2) Share Rs. 645 among a brother and two sisters so that the brother gets Rs. 135 more than each of his sisters.
(3) A boy had Rs. 45·25. He bought 6 ties at Rs. 6·75 each. How much had he left?
(4) Twelve posts are placed in line 2 metres 16 cm apart. How far is the first from the last?
(5) A wooden box has 8 packets of biscuits, each packet weighing 650 gm; 7 tins of sweets, each tin weighing 454 gm. If the box with the biscuits and sweets weighs 10 Kg. 75 gm, what is the weight of the box when empty?

TEST 8

(1) Multiply 84 by itself and divide the answer by 12.
(2) There are 7 cisterns each containing 24 litres 57 cl of water. How much water is there altogether?
(3) A piece of wire is 11 cm long. How many such pieces can be cut from a wire 17 m 82 cm long?
(4) Draw a triangle with sides of $7\frac{1}{2}$ cm, $8\frac{1}{2}$ cm and 9 cm.
(5) Draw a circle of radius 4 cm, and using your compasses and set squares draw a square inside the circle with the 4 corners touching the circle.

TEST 9

(1) A school hall is a rectangle, 18 metres long and 12 metres wide. Draw this rectangle using as scale 1 cm=3 metres.

(2) Draw a square of 6 cm, and using your compasses draw a flower having four petals.

(3) Draw a line of 12 cm and divide it into four equal parts.

(4) A boy walks 5 times round a hockey field of length 80 metres and width 50 metres. How much has he walked altogether ?

(5) 15 tables cost Rs. 180. Find the cost of 45 tables.

TEST 10

(1) Draw a triangle of sides 8 metres, 10 metres, 12 metres. Choose your own scale.

(2) Draw a rectangle of sides 9 cm and 7 cm. Divide the rectangle into squares of side 1 cm. How many squares are there altogether ?

(3) There are 225 chairs in a hall. If each chair weighs 6 Kg, find the total weight of all the chairs.

(4) I buy 25 fifteen-naya-paisa stamps, 12 airmail letters at 10 naye paise each, and 35 eight-naya-paisa stamps. What will I have left out of Rs. 9·25 ?

(5) (*a*) Multiply 856×9 and subtract 5989 from your answer.

(b) Add together $\frac{1}{9}$ of 63; $\frac{1}{7}$ of 42; $\frac{1}{6}$ of 48; $\frac{1}{12}$ of 96.

ANSWERS TO THE EXERCISES SET FOR INDIVIDUAL WORK

Individual Work 1 (page 8)

(1) 1604.
(2) 1561.
(3) 2512.
(4) 1786.
(5) 174.
(6) 2976.
(7) 532.
(8) 728.
(9) 2816.
(10) 78.
(11) 1311.
(12) 119.
(13) 109, 1 rem.
(14) 2184.
(15) 37.
(16) 302.
(17) 173.
(18) 60.
(19) 42.
(20) 7, 7 over.

Individual Work 2 (pages 26-28)

(A)

(1) 945, rem. 6.
(3) 1 Kg 785 gm.
(2) Rs. 26·05.
(4) Rs. 13·50.

(B)

(1) (*a*) Rs. 14·10; (*b*) Rs. 29·36. (2) 6676.
(3) 1018 each. (4) 2 kg 45 gm.

(C)

(1) 408. (2) Rs. 43·25. (3) Rs. 28 each. (4) 69.

(D)

(1) 3487; 1704; 3724; 28, rem. 9; 26, rem. 5; 76; 4944; 34, rem. 4; 816, rem. 4.
(2) Rs. 40. (3) Rs. 4·15. (4) 7 Kg 315 gm.

(E)

(1) Rs. 27·25 (2) 18. (3) Rs. 41·47; Rs. 88·22; Rs. 51·12; Rs. 41·58. (4) 117 Kg.

(F)

(1) 53, 4 over. (2) Rs. 24·71 Rs. 43·49
(3) 17 Kg 471 gm (4) Rs. 27·80.

(G)

(1) 2; 6; 6; 1; 6; 1; 5; 2. (2) Rs. 19·60. (3) 6 Kg 500 gm
(4) Rs. 32. (5) 224, 392.

Individual Work 3 (pages 39 and 40)

(1) 9 lengths, 2 m over (2) 34. (3) Rs. 32·85
(4) 1935. (5) 900 gm (6) 9 min. (7) 4655.
(8) 217 (9) Dec. 5th (10) 384 m (11) half past twelve.
(12) 50 min. (13) 56. (14) 124.
(15) Big Total=44 kg 634 gm (16) Big Total=Rs. 28·85
(17) Rs. 5·75. (18) 120. (19) Rs. 12·32
(20) (*a*)

```
 653
 282
 145
────
1080
────
```

(*b*)

```
56×
  7
───
392
───
```

(21) 12 min.
(22) 3 kg 500 gm
(23) 31.

Individual Work 4 (page 47)

(1) Rs. 135·90. (2) 6 Kg 600 gm (3) 131·85 cl.
(4) 4365 Km. (5) 144 Km. (6) 70; 155.
(7) Rs. 1·20. (8) 392 gm. (9) 182.
(10) 1 Kg. (11) Rs. 2·10. (12) 69 n.p.
(13) 142. (14)

```
93×
  8
───
744
───
```

(15) Sixty-three thousand, eight hundred and ninety-four.
Sixty thousand, eight hundred and four.
Six lakhs, eight hundred and four.
Six hundred and eighty-four thousand.

Individual Work 5 (page 73)

(1) 1014. (2) 27. (3) Rs. 4·50.
(4) Rs. 15·25. (5) $14\frac{1}{4}$. (6) $1\frac{7}{8}$.
(7) 109. (8) 1 1 800 cl. (9) 1326.
(10) 2 kg 358 gm (11) 7 Kg 600 gm. (12) 3250; 3967.

Individual Work 6 (page 74)

	Rs.
(1) Hockey Sticks ..	21·30
Balls ..	18·00
Bats ..	16·11
Ropes ..	17·60
	73·01
Balance Rs. ..	13·01

	Rs.
(2) Bus hire ..	22·50
Cakes ..	6·75
2-lb. cakes ..	14·80
Sandwiches ..	26·00
Chocolates ..	34·50
Tea etc. ..	5·85
	110·40
Subscribed by the class ..	45·40

	Rs.
(3) Cups	15·00
Bowls	15·75
Racquets	20·25
Consolation prizes ..	7·20
	58·20
Balance	7·80

HARDER MECHANICAL EXERCISES

Individual Work 7 (page 81)

(1) 179523; 422118; 1717670; 1693073.

(2) 157802; 148866; 303187; 26998.

(3) (i) (*a*) 4578954; (*b*) 6105272; (*c*) 8394749;
(*d*) 7631590; (*e*) 6868431; (*f*) 5342113;
(ii) (*a*) 5607392; (*b*) 4005280; (*c*) 4806336;
(*d*) 7209504; (*e*) 9612672; (*f*) 8010560;
(iii) (*a*) 2880513; (*b*) 2240399; (*c*) 1280228;
(*d*) 3840684; (*e*) 5120912; (*f*) 3200570;
(iv) (*a*) 5361888; (*b*) 6127872; (*c*) 3829920;
(*d*) 12255744; (*e*) 9191808; (*f*) 7659840;
(v) (*a*) 6044563; (*b*) 6908072; (*c*) 4317545;
(*d*) 13816144; (*e*) 10362108; (*f*) 8635090.

HARDER MECHANICAL EXERCISES

Individual Work 7 (page 81)

(4) (i)(*a*) 14221. (*b*) 10665; rem. 6. (*c*) 9480; rem. 6.
(*d*) 8532; rem. 6.(*e*) 12189; rem. 3.
(ii)(*a*) 9667; rem. 5.(*b*) 7250; rem. 7. (*c*) 6445; rem. 2.
(*d*) 5273; rem. 4.(*e*) 4833; rem. 11.
(iii)(*a*) 6251; rem. 1.(*e*) 7144; rem. 1. (*c*) 4546; rem. 3.
(*d*) 4167; rem. 5.(*e*) 3125; rem. 9.
(iv)(*a*) 11250; rem. 5.(*b*) 12857; rem. 6. (*c*) 8182; rem. 3.
(*d*) 7500; rem. 5.(*e*) 5625; rem. 5.
(v)(*a*) 9247; rem. 6.(*b*) 10568; rem. 6. (*c*) 6725; rem. 7.
(*d*) 6165; rem. 2.(*e*) 4623; rem. 14.

(5)	(*a*)	(*b*)	(*c*)
	Rs.	Rs.	Rs.
(i)	201·60;	214·95;	95·82.
(ii)	152·84;	81·11;	197·86.

(6)	(*a*)	(*b*)	(*c*)	(*d*)	(*e*)
	Rs.	Rs.	Rs.	Rs.	Rs.
(i)	172·50.	138·00.	155·25.	207·00.	276·00.
(ii)	3273·70.	2618·96.	2946·33.	3928·44.	5237·92.
(iii)	3388·32.	2964·78.	3811·86.	4658·94.	6776·64.
(iv)	5085·52.	4449·83.	5721·21.	7628·28.	10171·04.

(7)	(*a*)	(*b*)	(*c*)	(*d*)
	Rs.	Rs.	Rs.	Rs.
(i)	11·88.	10·56.	7·92.	8·64.
(ii)	50·40.	44·80.	80·40.	57·60.
(iii)	7·56.	6·72.	8·64.	5·04.

(8)	(*a*)	(*b*)	(*c*)	(*d*)
	26061;	57088;	65965;	24408.
	56373;	51684;	283370;	120198.
	331350;	659012;	631180;	715293.

(9) (*a*) 185 m 63 cm. (*b*) 314 Kg 48 gm.
(*c*) 329 1 25 cl.

(10) (*a*) 38 Kg 526 gm. (*b*) 17 Kg 590 gm.
(*c*) 27 Kg 113 gm. (*d*) 32 m 17 cm.
(e) 37 m 79 cm. (*f*) 5 1 97 cl.
(*g*) 45 1 97 cl. (*h*) 24 1 79 cl.
(*i*) 10 1 33 cl.

(11) (*a*) 34; (*b*) 37; (*c*) 47; (*d*) 73;
(*e*) 62; (*f*) 91, rem. 3; (*g*) 25; (*h*) 83;
rem. 1;
(*i*) 96, rem. 8; (*j*) 78; (*k*) 55; (*l*) 63.

Length

10 millimetres (mm) =1 centimetre (cm)
10 centimetres =1 decimetre (dm)
10 decimetres =1 metre (m)
1000 metres =1 Kilometre (Km)

Capacity

100 centilitres (cl) =1 litre

Weight

10 grams (gm) =1 dekagram (Dg)
10 dekagrams =1 hectogram (Hg)
10 hectograms =1 Kilogram (Kg)
1000 grams =1 Kilogram

Time

60 minutes (min) =1 hour (hr)
24 hours =1 day
7 days =1 week.
14 days =1 fortnight.
365 days =1 year.
366 days =1 leap year.

Number

12 units =1 dozen
12 dozen =1 gross.
20 units =1 score.

Money (Indian)

100 naye paise =1 Rupee

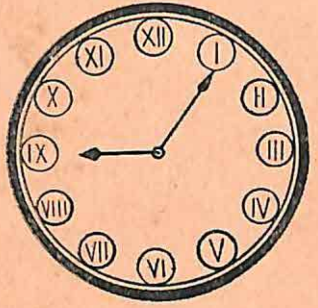
Money (British)

4 farthings (f) =1 penny (d)
12 pence =1 shilling (sh)
20 shillings =1 pound (£)
240 pence =1 pound (£)

MAGIC SQUARES

8	1	6
3	5	7
4	9	2

17	24	1	8	15
23	5	7	14	16
4	6	13	20	22
10	12	19	21	3
11	18	25	2	9



Days and Months

Thirty days hath September,
April, June and November.
All the rest have thirty-one
Excepting February alone,
Which has but 28 days clear,
And 29 in each leap year.

Roman Figures	Arabic Figures	Roman Figures	Arabic Figures	Roman Figures	Arabic Figures
I	1	IX	9	XVII	17
II	2	X	10	XVIII	18
III	3	XI	11	XIX	19
IV	4	XII	12	XX	20
V	5	XIII	13	XXX	30
VI	6	XIV	14	XL	40
VII	7	XV	15	L	50
VIII	8	XVI	16	C	100